

China's Currency Policy: An Analysis of the Economic Issues

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Summary

China's policy of intervening in currency markets to limit or halt the appreciation of its currency, the renminbi (RMB), against the U.S. dollar and other currencies has been an issue of concern for many in Congress over the past decade who view it as one of several distortive economic and trade policies that are used to convey an unfair competitive advantage to Chinese producers and exporters. They charge that China's currency policy is intended to make its exports significantly less expensive, and its imports more expensive, than would occur if the RMB were a freely-traded currency. They argue that the RMB is significantly undervalued against the dollar and that this has been a major contributor to the large annual U.S. trade deficits with China and a significant decline in U.S. manufacturing jobs in recent years.

China began to peg the RMB to the dollar in 1994 at about 8.28 yuan (the base unit of the RMB) per dollar and kept the rate constant through July 2005, when, under pressure from its major trading partners, it moved to a managed peg system and began to allow the RMB to gradually appreciate over the next three years. In July 2008, China halted RMB appreciation because of the effects of the global economic crisis on China's exporters. It resumed RMB appreciation in June 2010. From July 2005 through June 2013, the RMB appreciated by 34% on a nominal basis against the dollar and by 42% on a real (inflation-adjusted) basis. Over the past few years, China's current account surplus has declined, and its accumulation of foreign exchange reserves has slowed—factors that have led some analysts to contend the RMB is not as undervalued against the dollar as it once was.

The effects of China's currency policy on the U.S. economy are complex. If the RMB is undervalued (as some contend), then it might be viewed as an indirect export subsidy which artificially lowers the prices of Chinese products imported into the United States. Under this view, this benefits U.S. consumers and U.S. firms that use Chinese-made parts and components, but could negatively affect certain U.S. import-competing firms and their workers. An undervalued RMB might also have the effect of limiting the level of U.S. exports to China than might occur under a floating exchange rate system. The United States is also affected by China's large purchases of U.S. Treasury securities. China's intervention in currency markets causes it to accumulate large levels of foreign exchange reserves, especially U.S. dollars, which it then uses to purchase U.S. debt. Such purchases help the U.S. government fund its budget deficits and help keep U.S. interest rates low. These factors suggest that an appreciation of the RMB to the dollar benefits some U.S. economic sectors, but negatively affects others.

The effects of the recent global financial crisis have refocused attention on the need to reduce global imbalances in savings, investment, and trade, especially with regard to China and the United States, in order to avoid future crises. Many economists contend that China should take greater steps to rebalance its economy by lessening its dependence on exports and fixed investment as the main drivers of its economic growth, while boosting the level of domestic consumer demand (which would increase Chinese imports). A market-based currency policy is seen as an important factor in achieving this goal.

Currency bills aimed at addressing China's currency policy have been introduced in every session of Congress since 2003. The House approved a currency bill in the 111th Congress and the Senate passed one in the 112th Congress. Currency legislation has been proposed in the 113th Congress, including H.R. 1276 and S. 1114. In recent years, congressional concerns about undervalued currencies have moved beyond China to include those of several other countries as well.

Contents

Introduction and Overview of the Currency Issue.....	1
Background on China's Currency Policy	2
2005: China Reforms the Peg	3
2008: RMB Appreciation Halted	3
2010: RMB Appreciation Resumes.....	4
Factoring in Inflation and Trade-Weighted Flows	6
Concerns in the United States over China's Currency Policy: Trade Deficits and Jobs	7
Legislative Proposals to Address Undervalued Currencies.....	14
Legislation in the 113 th Congress	15
H.R. 1276: The Currency Reform for Fair Trade Act	15
S. 1114: The Currency Exchange Rate Oversight Reform Act of 2013.....	16
The Obama Administration's Position and Policies	18
An Economic Analysis of the Effects of China's Currency on the U.S. Economy	20
What Is the RMB's "True Value"? Can it Be Accurately Estimated?.....	20
The Debate over the Effects of Exchange Rate Appreciation on Trade Flows and the	
Deficit	24
The J Curve Effect	25
The Role of Exchange Rate Pass-Through	25
China's Role in the Global Supply Chain.....	26
Underlying Macroeconomic Imbalances Are Unlikely to Disappear	27
Differing Opinions on Making RMB Appreciation a Top U.S. Trade Priority	27
Winners and Losers of RMB Appreciation from an Economic Perspective	28
Effect on U.S. Exporters and Import-Competitors.....	29
Effect on U.S. Consumers and Certain Producers	29
Effect on U.S. Borrowers.....	29
Net Effect on the U.S. Economy.....	30
China's Perspective and Concerns: Economic Growth and Stability.....	31
The Effects of an Undervalued RMB on China's Economy	32
Policy Options for the RMB and Potential Outcomes.....	34
Current Account Balances, Savings, and Investment.....	39
Chinese Investment and Consumption Relative to GDP	42
Sources of China's Economic Growth	45

Figures

Figure 1. Nominal RMB/Dollar Exchange Rate: January 2008 to May 2010.....	4
Figure 2. Average Monthly Yuan-Dollar Exchange Rates: June 2010-June 2013.....	5
Figure 3. Annual Percent Change in the Yuan/Dollar Exchange Rate: 2005 to 2012	5
Figure 4. Change in China's Real Trade-Weighted Exchange Rate: June 2010-May 2013	7
Figure 5. China's Current Account Balance, Merchandise Trade Balance, and Annual	
Change in Foreign Exchange Reserves: 2001-2012.....	9
Figure 6. Annual Percent Change in China's Foreign Exchange Reserves: 2001-2012.....	9
Figure 7. Chinese Exports of Goods and Services as a Percent of GDP: 1990-2012.....	10

Figure 8. Timeline of Estimates of the RMB's Undervaluation Relative to the Dollar Using the FEER Method: 2008-2013.....	24
Figure 9. Index of U.S. Import Prices of Commodities from China: December 2003- December 2012	26
Figure 10. Change in China's Trade Flows: 2000-June 2013	32
Figure A-1. Chinese and U.S. Current Account Balances: 2000-2012.....	40
Figure A-2. Chinese and U.S. Current Account Balances as a Percent of GDP: 2000-2012 and Estimates Through 2018.....	41
Figure A-3. Gross National Savings as a Percent of GDP for China and the United States: 1990-2012.....	42
Figure A-4. Chinese Private Consumption, Investment, and Gross National Savings as a Percent of GDP: 1990-2012	43
Figure A-5. Annual Growth in Real Chinese and U.S. Private Consumption: 2001-2012.....	43
Figure A-6. Chinese Personal Disposal Income as a Percent of GDP: 2001-2012	45
Figure A-7. Chinese Real Deposit Interest Rates: 2000-2012.....	45
Figure A-8. Chinese Real GDP Growth and Sources of GDP Growth: 2006-2012	46

Tables

Table 1. Estimates of Currency Misalignment Against the Dollar in April 2013 for Selected Countries.....	23
Table A-1. Ratio of Gross National Savings to Gross Investment and Current Account Balances as a Percent of GDP for Selected Major Economies: 2012.....	40

Appendixes

Appendix. Indicators of U.S. and Chinese Economic Imbalances	38
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Contacts

Author Information.....	47
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Introduction and Overview of the Currency Issue

China's policy of intervention to limit the appreciation of its currency, the renminbi (RMB) against the dollar and other currencies has become a major source of tension with many of its trading partners, especially the United States.¹ Some analysts contend that China deliberately "manipulates" its currency in order to gain unfair trade advantages over its trading partners. They further argue that China's undervalued currency has been a major factor in the large annual U.S. trade deficits with China and has contributed to widespread job losses in the United States, especially in manufacturing. President Obama stated in February 2010 that China's undervalued currency puts U.S. firms at a "huge competitive disadvantage," and he pledged to make addressing China's currency policy a top priority.² At a news conference in November 2011, President Obama stated that China needed to "go ahead and move towards a market-based system for their currency" and that the United States and other countries felt that "enough is enough."³

Legislation to address China's currency policy has been introduced in every session of Congress since 2003. The House passed currency legislation in 2010 and the Senate did so in 2011, although none became law. On March 20, 2013, Representative Sander Levin introduced H.R. 1276 to "clarify that U.S. countervailing duties may be imposed to address subsidies relating to a fundamentally undervalued currency of any foreign country." On June 7, 2013, Senator Sherrod Brown introduced S. 1114, which would require action against certain misaligned currencies. In recent years, congressional concerns over misaligned (or undervalued currencies) have extended to other countries as well, leading some Members to propose that currency provisions be included in future U.S. trade agreements.

China began to gradually reform its currency policy in July 2005, and between then and the end of June 2013, the RMB has appreciated by 34% on a nominal basis (and 42% on an inflation-adjusted basis) against the U.S. dollar. In addition, China's trade surpluses have fallen sharply in recent years and its accumulation of foreign exchange reserves has slowed. These factors have led some analysts to conclude that the RMB exchange rate with the dollar may be approaching market levels, or is, at best, only modestly undervalued. However, other analysts contend that the RMB remains significantly undervalued against the dollar and complain that the RMB has appreciated little against the dollar since the end of 2011. Thus, they argue that continued pressure must be applied until the Chinese government adopts a market-based exchange rate.

Although economists differ as to the economic effects an undervalued RMB might have on the United States (many cite both positive and negative effects), most agree that greater currency flexibility by China would be one of several reforms that would help reduce global imbalances, which are believed to have been a major factor that sparked the global financial crisis and economic slowdown. They further contend that currency reform is in China's own long-term interests because it would boost economic efficiency. China's government has pledged to continue to make its currency policy more flexible, but has maintained that appreciating the RMB too quickly could cause significant job losses (especially in China's export sectors), which could disrupt the economy.

Some economists question whether RMB appreciation would produce significant net benefits for the U.S. economy. They argue that prices for Chinese products would rise, which would hurt U.S.

¹ The official name of China's currency is the renminbi (RMB), which is denominated in yuan units. Both RMB and yuan are used interchangeably to describe China's currency.

² The White House, *Remarks by the President at the Senate Democratic Policy Committee Issues Conference*, February 3, 2010.

³ The White House, *News Conference by President Obama*, November 14, 2011.

consumers and U.S. firms that use imported Chinese components in their production. In addition, an appreciating RMB might lessen the Chinese government's need to purchase U.S. Treasury securities, which could cause U.S. interest rates to rise. It is further argued that an appreciating currency would do little to shift manufacturing done by foreign-invested firms (including U.S. firms) in China to the United States; instead, such firms would likely shift production to other low-cost East Asian countries. Finally, it is argued that an appreciating RMB might boost some U.S. exports to China, but the effects of lower prices for U.S. products in China could be negated to a large extent by China's restrictive trade and investment barriers. Such analysts view currency reform as part of a broad set of goals that U.S. trade policy should pursue. These goals include inducing China to rebalance its economy by making consumer demand, rather than exports and fixed investment, the main sources of China's economic growth; eliminate industrial policies that seek to promote and protect Chinese firms (especially state-owned firms); reduce trade and investment barriers; and improve protection of U.S. intellectual property rights.

This report provides an overview of the economic issues surrounding the current debate over China's currency policy. It identifies the economic costs and benefits of China's currency policy for both China and the United States, and possible implications if China were to allow its currency to significantly appreciate or to float freely. It also examines legislative proposals that seek to address China's (and other countries') currency policy.

Background on China's Currency Policy

Prior to 1994, China maintained a dual exchange rate system. This consisted of an official fixed exchange rate system (which was used by the government), and a relatively market-based exchange rate system that was used by importers and exporters in "swap markets,"⁴ although access to foreign exchange was highly restricted in order to limit imports, resulting in a large black market for foreign exchange. The two exchange rates differed significantly. The official exchange rate with the dollar in 1993 was 5.77 yuan versus 8.70 yuan in the swap markets. China's dual exchange rate system was criticized by the United States because of the restrictions it (and other policies) placed on foreign imports.

In 1994, the Chinese government unified the two exchange rate systems at an initial rate of 8.70 yuan to the dollar, which eventually was allowed to rise to 8.28 by 1997 and was then kept relatively constant until July 2005. The RMB became largely convertible on a current account (trade) basis, but not on a capital account basis, meaning that foreign exchange in China is not regularly obtainable for investment purposes.⁵ From 1994 until July 2005, China maintained a policy of pegging the RMB to the U.S. dollar at an exchange rate of roughly 8.28 yuan to the dollar. The peg appears to have been largely intended to promote a relatively stable environment for foreign trade and investment in China (since such a policy prevents large swings in exchange rates)—a policy utilized by many developing countries in their early development stages. The Chinese central bank maintained this peg by buying (or selling) as many dollar-denominated assets in exchange for newly printed yuan as needed to eliminate excess demand (supply) for the

⁴ These were government-sanctioned foreign exchange adjustment centers (established in 1986) to allow a limited amount of trade in foreign exchange, although the central government intervened to prevent the RMB from strengthening beyond 6 yuan per dollar. Source: U.S. Department of State, *Country Reports on Economic Policy and Trade Practices*, February 1990, p. 253.

⁵ Overseas investment by Chinese citizens is tightly regulated and restricted by the central government. For example, it would be very difficult for a Chinese citizen to open a savings account in another country or invest in shares of foreign stocks without permission from the government. Limiting capital outflows from China is a key policy tool of the central government to control exchange rates within China. In addition, some analysts contend that China fears that an open capital account would lead to capital flight, which could undermine its financial system.

yuan. As a result, the exchange rate between the RMB and the dollar varied little, despite changing economic factors which could have otherwise caused the yuan to appreciate (or depreciate) relative to the dollar. Under a floating exchange rate system, the relative demand for the two countries' goods and assets would determine the exchange rate of the RMB to the dollar.

2005: China Reforms the Peg

The Chinese government modified its currency policy on July 21, 2005. It announced that the RMB's exchange rate would become "adjustable, based on market supply and demand with reference to exchange rate movements of currencies in a basket,"⁶ and that the exchange rate of the U.S. dollar against the RMB would be adjusted from 8.28 yuan to 8.11, an appreciation of 2.1%. Unlike a true floating exchange rate, the RMB would be allowed to fluctuate by up to 0.3% (later changed to 0.5%) on a daily basis against the basket.

After July 2005, China allowed the RMB to appreciate steadily, but very slowly. From July 21, 2005, to July 21, 2008, the dollar-RMB exchange rate went from 8.11 to 6.83, an appreciation of 18.7% (or 20.8% if the initial 2.1% appreciation of the RMB to the dollar is included). The situation at this time might be best described as a "managed float"—market forces determined the general direction of the RMB's movement, but the government retarded its rate of appreciation through market intervention.

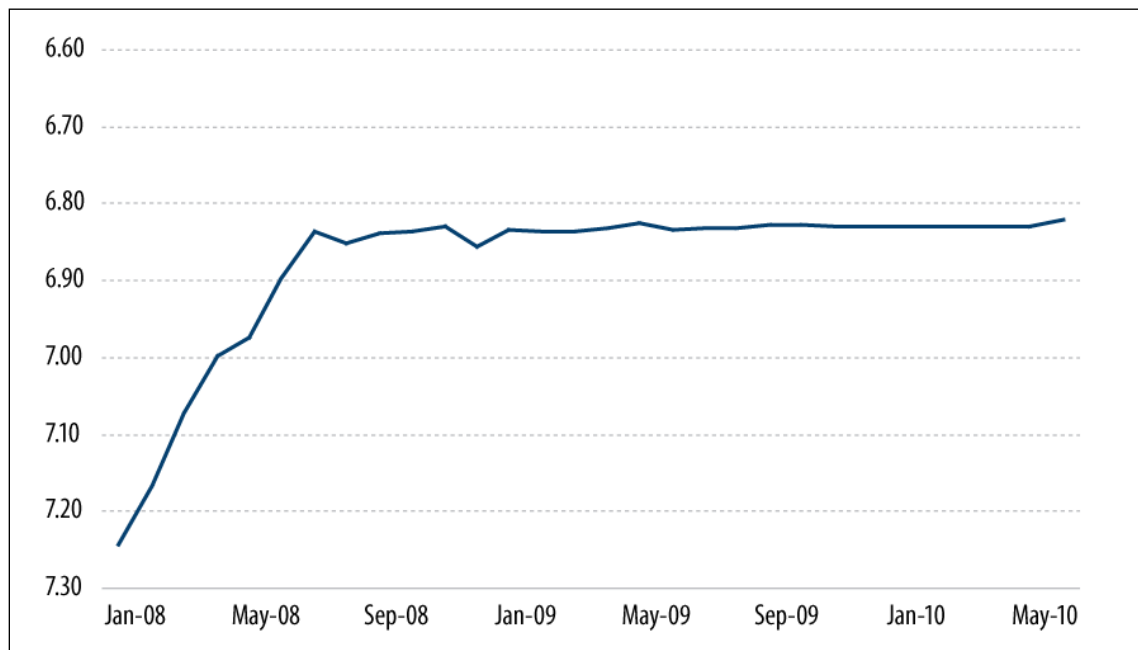
2008: RMB Appreciation Halted

China halted its currency appreciation policy around mid-July 2008 (see **Figure 1**), mainly because of declining global demand for Chinese products that resulted from the effects of the global financial crisis. In 2009, Chinese exports fell by 15.9% over the previous year. The Chinese government reported that thousands of export-oriented factories were shut down and that over 20 million migrant workers lost their jobs in 2009 because of the direct effects of the global economic slowdown.⁷ In response, the Chinese government intervened to prevent any further appreciation of the RMB to the dollar. The RMB/dollar exchange rate was held relatively constant at 6.83 through around mid-June 2010.

⁶ It was later announced that the composition of the basket would include the dollar, the yen, the euro, and a few other currencies, although the currency composition of the basket has never been revealed. If the value of the yuan were determined according to a basket of currencies, however, it would not have shown the stability it has had against the dollar between mid-2008 and mid-2010, unless the basket were overwhelmingly weighted toward dollars.

⁷ China Daily, February 3, 2009, at http://www.chinadaily.com.cn/china/2009-02/03/content_7440106.htm.

Figure 1. Nominal RMB/Dollar Exchange Rate: January 2008 to May 2010
(yuan per U.S. dollar [monthly averages])



Source: Global Insight.

Note: Chart inverted for illustrative purposes. A rising line indicates appreciation of the RMB to the dollar and a falling line indicates depreciation.

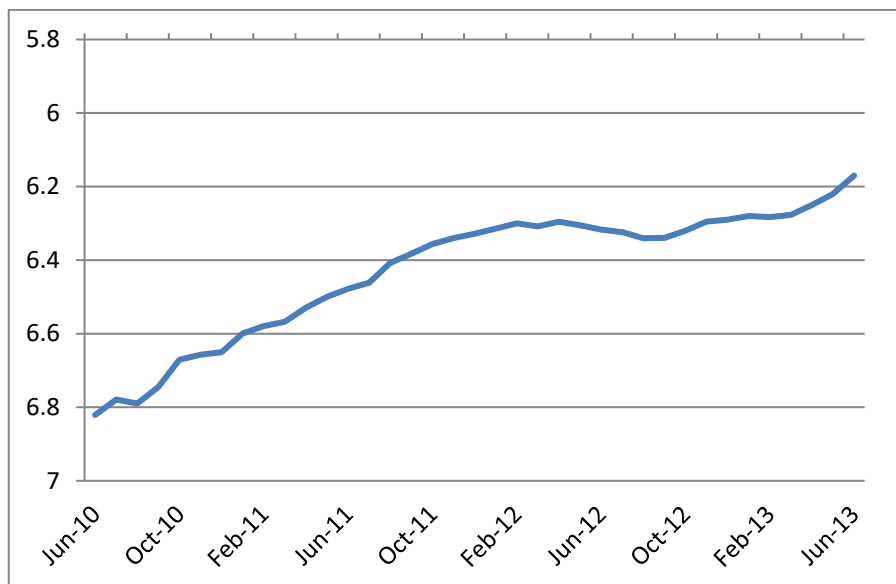
2010: RMB Appreciation Resumes

On June 19, 2010, China's central bank, the People's Bank of China (PBC), stated that, based on current economic conditions, it had decided to "proceed further with reform of the RMB exchange rate regime and to enhance the RMB exchange rate flexibility." It ruled out any large one-time revaluations, stating "it is important to avoid any sharp and massive fluctuations of the RMB exchange rate," in part so that Chinese corporations could more easily adjust (such as through technology upgrading) to an appreciation of the currency. Many observers contend the timing of the RMB announcement was intended in part to prevent China's currency policy from being a central focus of the G-20 summit in Toronto in June 2010. As indicated in **Figure 2**, the RMB's exchange rate with the dollar has gone up and down since RMB appreciation was resumed, but overall, it has appreciated.⁸ From June 19, 2010, (when appreciation was resumed) to July 10, 2013, the yuan/dollar exchange rate went from 6.83 to 6.17, an appreciation of 10.7%. Most of the appreciation occurred in 2010 and 2011. From January 1, 2012, to July 10, 2013, the RMB appreciated by only 2.1% against the dollar.⁹ **Figure 3** shows the annual percentage change in the RMB's value against the dollar from 2001 to 2012 and indicates that the sharpest appreciation occurred in 2008 when it rose by 9.4%.

⁸ The fact that the currency has appreciated some days but has depreciated on others raises a number of questions as to the extent and pace the PBC will allow the RMB to appreciate over time. Many observers believe that this is a sign that appreciation of the RMB will happen over a long period of time, but in an unpredictable way in an effort to limit RMB speculation and inflows of "hot money," which could destabilize China's economy.

⁹ The exchange rate went from 6.30 yuan per dollar to 6.17.

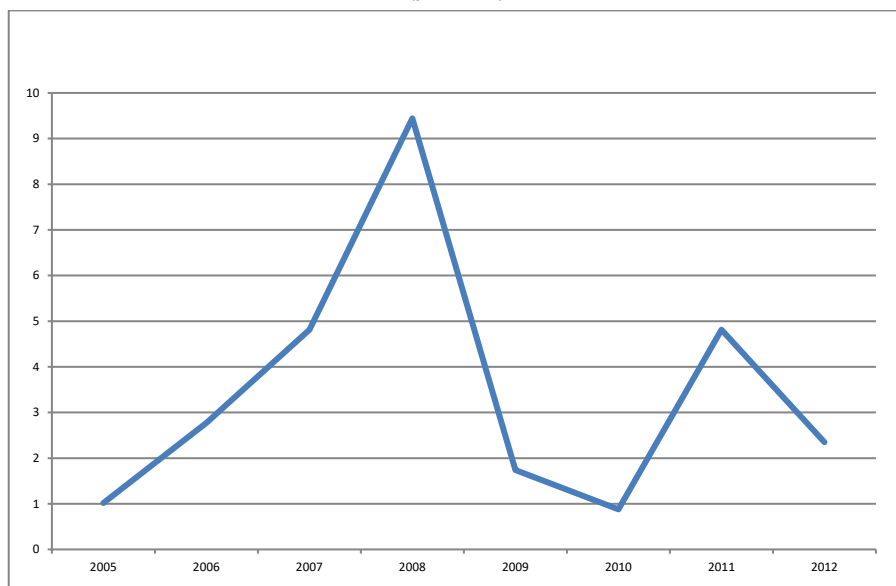
Figure 2. Average Monthly Yuan-Dollar Exchange Rates: June 2010-June 2013
(yuan per U.S. dollar)



Source: Global Insight.

Notes: Chart inverted for illustrative purposes to show the appreciation or depreciation of the RMB against the dollar. Data are the Chinese government's official middle rate.

Figure 3. Annual Percent Change in the Yuan/Dollar Exchange Rate: 2005 to 2012
(percent)



Source: Global Insight.

Notes: Change in average annual exchange rates.

Factoring in Inflation and Trade-Weighted Flows

Some economists contend that a more accurate measurement of the yuan/dollar exchange rate involves accounting for differences in inflation between China and the United States—the real exchange rate. This approach is relevant because if prices are rising faster in China than in the United States, then the prices of Chinese tradable goods may be rising as well (even with no change in the nominal exchange rate). In effect, a higher Chinese inflation rate relative to the United States acts as a *de facto* appreciation of the RMB. From June 2005 to June 2013, China's consumer price inflation was about 31% higher than the U.S. level. Factoring in inflation into the RMB/dollar exchange rate indicates that the RMB appreciated in real terms by 42% during this period (as opposed to a 34% increase on a nominal basis).¹⁰

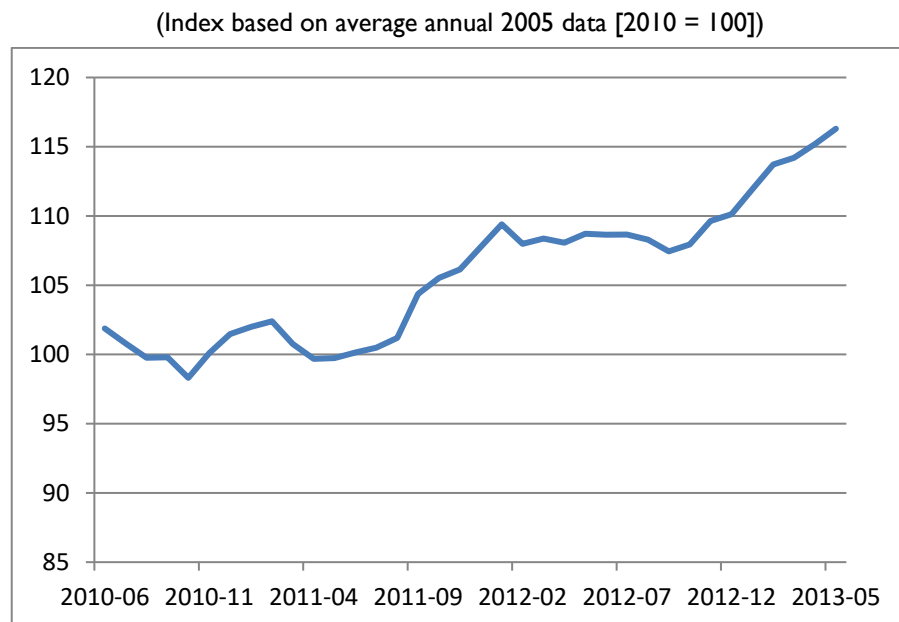
A broader measurement of the RMB's movement involves looking at exchange rates with China's major trading partners by using a trade-weighted index (i.e., a basket of currencies) that is adjusted for inflation, often referred to as the "effective exchange rate."¹¹ The Bank of International Settlements maintains such an index for major economies, based on their trade with 61 trading partners.¹² Such an index is useful because it reflects overall changes in a country's exchange rate with its major trading partners as a whole—not just the United States. China's relative peg to the dollar has meant that as the dollar has depreciated or appreciated against a number of major currencies, the RMB has depreciated or appreciated against them as well. For example, from July 2008 to May 2010, when the RMB exchange rate to the dollar was kept constant (at 6.83 yuan per dollar), the real trade-weighted exchange rate index of China's currency (based on its trade with 61 major economies) appreciated by 8.2%. Between June 2010 (when appreciation of the RMB to the dollar was resumed) and May 2013, China's real trade-weighted exchange rate appreciated by 16.9%; and during the first five months of 2013, it rose by 4.6% (see **Figure 4**).¹³

¹⁰ This report uses the monthly consumer price index from Global Insight to calculate the real yuan/dollar exchange rate.

¹¹ A trade-weighted index reflects the relative importance of each partner's trade with China. The index itself is calculated as the geometric weighted averages of bilateral exchange rates. According to Chinese data, the United States is second largest trading partner after the European Union (EU). Thus the dollar accounts for a significant portion of the index—it averaged 19 points (out of 100) from 2008 to 2010, while the euro averaged 19.4 points.

¹² Bank of International Settlements, BIS Effective Exchange Rates, at <http://www.bis.org/statistics/eer/index.htm>.

¹³ In comparison, the nominal percentage change in the yuan/dollar exchange rate over these periods was 9.6% and 1.3% (based on monthly averages).

Figure 4. Change in China's Real Trade-Weighted Exchange Rate: June 2010-May 2013

Source: Bank of International Settlements.

Note: Weights calculated based on China's trade with 61 economies. Inflation calculated using measurements of national consumer price indexes.

Concerns in the United States over China's Currency Policy: Trade Deficits and Jobs

Many U.S. policymakers and certain business and labor representatives have charged that the Chinese government “manipulates” its currency in order to make it significantly undervalued vis-à-vis the U.S. dollar, thus making Chinese exports to the United States less expensive, and U.S. exports to China more expensive, than they would be if exchange rates were determined by market forces.¹⁴ They further contend that, while a pegged currency may have been appropriate during China's early stages of economic development, it can no longer be justified, given the size of China's economy and trade flows, and the impact these have on the global economy.¹⁵

Critics have further charged that the undervalued currency has been a major factor behind the burgeoning U.S. trade deficit with China, which grew from \$84 billion in 2000 to \$315 billion in 2012 and is projected to reach \$325 billion in 2013 (based on data for January-May 2013). Other factors that have been cited as evidence of Chinese currency manipulation (and misalignment) have been China's massive accumulation of foreign exchange reserves and the size of its current account surpluses.¹⁶ China is by far the world's largest holder of foreign exchange reserves. These grew from \$212 billion in 2001 to \$3.3 trillion in 2012 (year-end values).

¹⁴ In general, U.S.-invested firms in China do not appear to be as concerned over the value of China's currency relative to the dollar as are U.S. import-sensitive firms that compete with low-priced Chinese products.

¹⁵ China emerged as the world's largest merchandise exporter in 2010 (accounting for 10.1% of global exports) and the seconding largest economy. These rankings have stayed constant through 2012.

¹⁶ The current account balance is the broadest measurement of trade flows because it includes trade in goods and

Many analysts contend that large increases in China's foreign exchange reserves reflect the significance of Chinese intervention in currency markets to hold down the value of the RMB, which, they argue, has been a major factor behind China's large annual current account surpluses. According to one economist, a country's current account balance increases between 60 and 100 cents for each dollar spent on currency intervention.¹⁷ As can be seen in **Figure 5**, China's foreign exchange holdings grew significantly from 2004 to 2011, averaging \$363 billion in new reserves each year, but that growth slowed sharply in 2012 (\$129 billion). As indicated in **Figure 6**, the annual rate of increase (percent change) in China's foreign exchange reserves went from a 51.3% rise in 2004, to 27.2% in 2008, to 4.1% in 2012.¹⁸

China's current account surplus rose from \$69 billion in 2004 to a historical peak of \$421 billion in 2008. It then declined over the next few years, dropping to \$140 billion by 2011; it rose to \$192 billion in 2012, according to the International Monetary Fund (IMF).¹⁹ More significantly, China's current account surplus as a percent of GDP fell as well. It dropped from a historical high of 10.1% in 2007 to 1.9% in 2011, but increased to 2.3% in 2012.²⁰ In addition, China's exports of goods and services as a percent of GDP declined from a historical high of 38.3% in 2007 to 27.5% in 2012, as indicated in **Figure 7**.

Many analysts contend the sharp drop in China's current account surpluses may have had more to do with the effects of the global economic slowdown (which greatly diminished global demand for Chinese products and led to a fall in foreign direct investment in China) than a change in China currency policies (although other Chinese economic policies were a major factor in the decline of the current account surplus, such as government policies to boost fixed investment and consumption which were employed to maintain rapid economic growth in the face of the global economic crisis).²¹ In a July 2010 report, the IMF warned that, over the medium term, there was potential for China's sizable current account surpluses to return once its stimulus measures wound down and the global economy began to recover.²² In July 2012, the IMF stated that, although the fall of China's current account surplus was a welcome sign, the external rebalancing was achieved at the cost of rising internal imbalances—namely the high rate of investment spending, which, the IMF assessed, would be difficult to sustain.²³

services. It also includes income flows and current transfer payments.

¹⁷ Gagnon, Joseph, *The Elephant Hiding in the Room: Currency Intervention and Trade Imbalances*, Peterson Institute for International Economics, Working Paper 13-2, March 2013, at <http://www.piie.com/publications/wp/wp13-2.pdf>.

¹⁸ China's accumulation of foreign exchange reserves in the first quarter of 2013 was 3.9% higher than in the previous quarter.

¹⁹ Similarly, China's merchandise trade surplus rose from \$32 billion in 2004 to a historical high of \$297 billion in 2008. China's merchandise trade surplus declined over the next few years, hitting \$158 billion in 2011; it rose to \$233 billion in 2012.

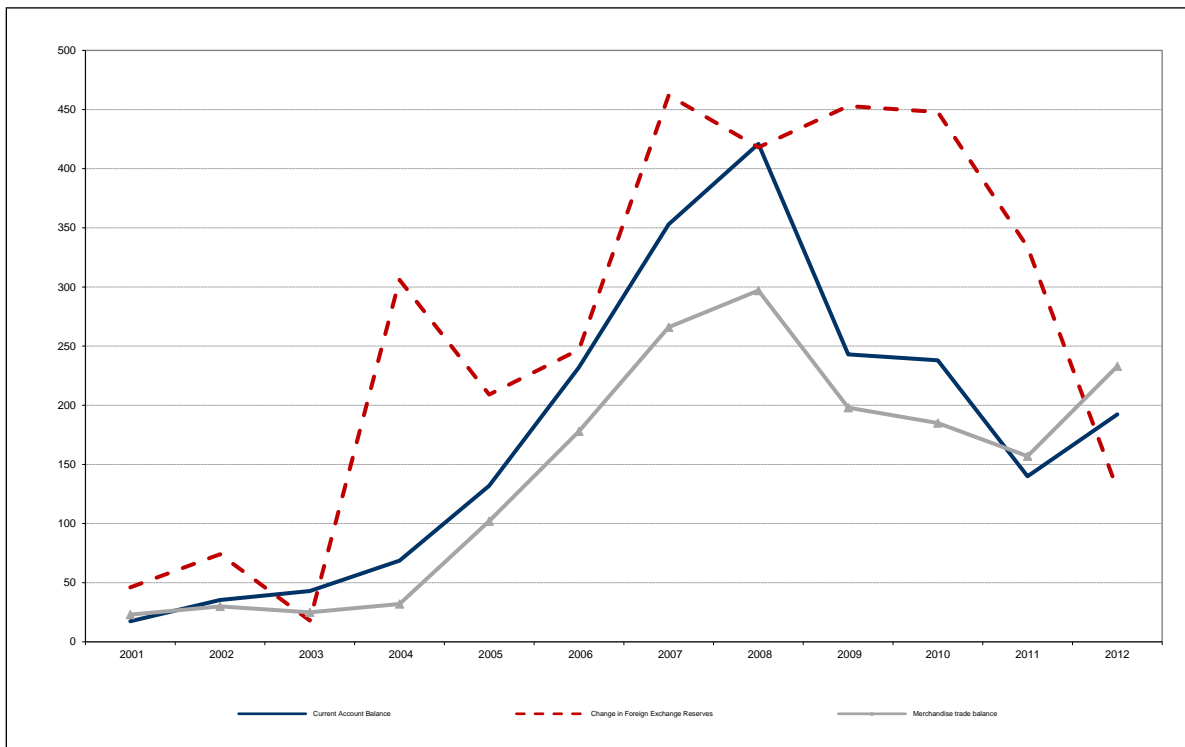
²⁰ IMF, *Press Release*, July 17, 2013, at <http://www.imf.org/external/np/sec/pr/2013/pr13260.htm>. Note, the IMF's July 2013 estimates of China's current account surpluses as a percent of GDP in 2011 and 2012 were different than the estimates it made in April 2013 (at 2.8% and 2.6%, respectively).

²¹ For additional information on China's response to the global economic crisis, see CRS Report RL33534, *China's Economic Rise: History, Trends, Challenges, and Implications for the United States*, by Wayne M. Morrison.

²² IMF, *People's Republic of China: 2010 Article IV Consultation—Staff Report; Staff Statement; Public Information Notice on the Executive Board Discussion*, July 2010, p. 1.

²³ IMF, *People's Republic of China: 2010 Article IV Consultation—Staff Report For the 2012 Article IV Consultation*, July 6, 2011, p. 1.

Figure 5. China's Current Account Balance, Merchandise Trade Balance, and Annual Change in Foreign Exchange Reserves: 2001-2012
(\$ billions)



Source: Economist Intelligence Unit, IMF, and Chinese State Administration of Foreign Exchange.

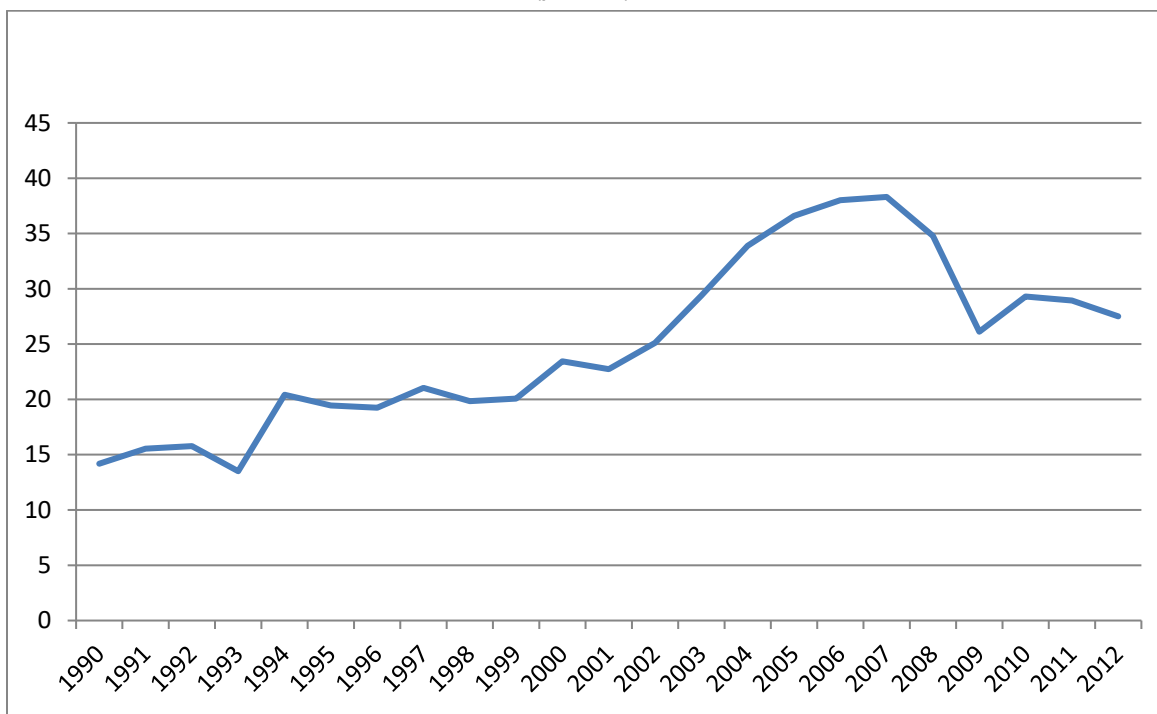
Figure 6. Annual Percent Change in China's Foreign Exchange Reserves: 2001-2012
(percent)



Source: China State Administration of Foreign Exchange.

Notes: Percent change over the previous year.

Figure 7. Chinese Exports of Goods and Services as a Percent of GDP: 1990-2012
(percent)



Source: Economist Intelligence Unit.

Congressional Concerns Over Currencies Extends Beyond China

China is not alone in being accused of having an undervalued currency. Several other countries have been accused of attempting to keep the value of their currencies low through different efforts, including monetary policy.

A July 2012 study by the Peterson Institute for International Economics contends that “currency manipulation,” based on “excessive” levels of foreign exchange reserves (FERs), is widespread, especially in developing and newly industrialized countries.²⁴ The study identified 22 economies that “manipulate their currency” based on the size of their FERs as a percent of GDP and the cumulative increase in FERs as a percent of GDP in 2012, the most significant of which were China (considered by the authors to be the most significant in terms of the size of China’s economy and its FERs and the amounts of intervention), Denmark, Hong Kong, Korea, Malaysia, Singapore, Switzerland, and Taiwan.²⁵ The Peterson Institute estimated that currency intervention by the 22 economies increased the U.S. trade and current account deficits by \$200 billion to \$500 billion and caused the loss of 1 million to 5 million U.S. jobs.

In September 2012, Representative Mike Michaud sent a letter to Administration officials expressing “concern about Korea’s ongoing intervention in its currency and its impact on U.S. businesses and workers, particularly now that the Korea-U.S. Free Trade Agreement (FTA) has been implemented. The undervaluation of the won already gives Korean exports a competitive advantage over U.S.-made goods, and if left unchecked it will neutralize Korean tariff reductions included in the agreement.”

²⁴ Peterson Institute for International Economics, *Currency Manipulation, the US Economy, and the Global Economic Order*, by C. Fred Bergsten and Joseph E. Gagnon, December 2012.

²⁵ Other “manipulators” included Japan, Libya, Algeria, Saudi Arabia, Thailand, Malaysia, Israel, South Korea, Argentina, Bolivia, the Philippines, Angola, Kazakhstan, Azerbaijan, Angola, and Russia.

Japanese policies to boost economic growth, including quantitative easing (i.e., monetary expansion) have contributed to a sharp decline of the yen in international markets and have come under criticism by policymakers in several countries. In March 2013, Gao Xiqing, head of the China Investment Corporation (China's largest sovereign wealth fund), reportedly warned Japan against using its neighbors as a "garbage bin" by deliberately devaluing the yen through the use of expansive monetary policy.²⁶ At a March 2013 Senate Finance Hearing on trade policy, Senator Debbie Stabenow stated that an agreement to include Japan in the Trans-Pacific Partnership (TPP) negotiations should include rules to counteract currency manipulation by Japan. She stated: "I want to indicate for the record that unless we see changes on currency manipulation and efforts and benchmarks to Japan opening their markets, I can't imagine why would we want to proceed with a one-sided agreement as it relates to American manufacturing and the automobile industry."²⁷ On April 12, 2013, Representative Levin, reacting to the Administration's announcement on Japan's participation in the Trans-Pacific Partnership, stated that "the absence of any mention of currency is highly problematical. Japan has used currency intervention to give Japanese auto companies one of their most significant unfair competitive advantages, adding tens of billions of dollars to their operating profits for every one-yen drop against the dollar."²⁸ While economic theory predicts that quantitative easing would cause a country's exchange rate to depreciate, it should be noted that it has been used in many countries following the financial crisis, including the United States.

In a May 2013 lecture, C. Fred Bergsten from the Peterson Institute stated that the international monetary system "now faces a clear and present danger: currency wars. Virtually every major country is seeking depreciation, or at least non-appreciation, of its currency to strengthen its economy and create jobs."²⁹

A June 6, 2013, letter to the Obama Administration from 230 House Members on the TPP stated that it was "imperative" that the agreement address currency manipulation which has "contributed to the U.S. trade deficit and cost us American jobs."³⁰

The current high rate of unemployment in the United States appears to have intensified concerns over the perceived impact of China's currency policy on the U.S. economy, especially employment. Many have argued that RMB appreciation would boost the level of U.S. jobs. Some analysts contend that there is a direct correlation between the U.S. trade deficit and U.S. job losses. For example, a 2012 study by the Economic Policy Institute (EPI) claims that the U.S. trade deficit with China (which EPI claims is largely the result of China's currency policy) led to the loss or displacement of 2.7 million jobs (of which, 77% were in manufacturing) between 2001 and 2011.³¹ The EPI report states that, while U.S. exports to China support U.S. jobs, U.S. imports from China "displace American workers who would have been employed making these products in the United States."³² Claims about the negative effect of China's exchange rate on U.S. employment and trade are often juxtaposed with the observation that China's economy has grown rapidly over the past five years (real GDP grew at an average annual rate of 9.2% from 2008 to 2012), while other countries have experienced slow or stagnant growth since the beginning of the global financial crisis. This has led some commentators to argue that China's

²⁶ Wall St. Journal, "China Fund Warns Japan Against a 'Currency War,'" March 6, 2013.

²⁷ *Inside U.S. Trade*, April 13, 2013.

²⁸ Office of Congressman Sandy Levin, Press Release, "U.S. Announcement on Japan and TPP," April 12, 2013.

²⁹ Peterson Institute for International Economics, Press Release, May 16, 2013, at <http://www.iie.com/publications/newsreleases/newsrelease.cfm?id=203>.

³⁰ Office of Congressman Mike Michaud, Press Release, "Majority of House Members Push Obama to Address Currency Manipulation in TPP," June 6, 2013, at <http://michaud.house.gov/press-release/majority-house-members-push-obama-address-currency-manipulation-tp>.

³¹ Economic Policy Institute, *the China Toll: Growing U.S. trade deficit with China Cost More Than 2.7 Million Jobs between 2001 and 2011, With Job Losses in Every State*, by Robert E. Scott, August 23, 2012. Note, some have criticized the methodology used in the report, which assumes that the U.S. trade deficit with China has a direct and significant effect on the level of employment in the United States.

³² *Ibid.*, p. 8.

exchange rate intervention represents a “beggar thy neighbor” policy (i.e., meant to promote Chinese economic development at the expense of other countries). (The validity of claims about the RMB’s effect on the U.S. economy will be analyzed in the section below entitled “An Economic Analysis of the Effects of China’s Currency ”) For example, U.S. economist Paul Krugman in 2009 argued that the undervalued RMB had become a significant drag on global economic recovery, estimating that it had lowered global GDP by 1.4%, and had especially hurt poor countries.³³ Because of these factors, some Members have argued that China should be cited by the Department of the Treasury as a country that manipulates its currency in order to gain an unfair trade advantage (see text box).

³³ New York Times, December 31, 2009. Krugman also estimated that China’s currency policy caused 1.4 million job losses in the United States.

Is China a “Currency Manipulator?”

The U.S. Department of the Treasury is required on a biannual basis to issue a *Report to Congress on International Economic and Exchange Rate Policies* of major U.S. trading partners,³⁴ and to “consider whether countries manipulate the rate of exchange between their currency and the United States dollar for purposes of preventing effective balance of payments adjustments or gaining unfair competitive advantage in international trade.”³⁵ If such manipulation is found to exist with respect to countries that have material global current account surpluses and have significant bilateral trade surpluses with the United States, the Secretary of the Treasury is directed to initiate negotiations with such countries on an expedited basis in the International Monetary Fund or bilaterally, for the purpose of ensuring that such countries regularly and promptly adjust the rate of exchange between their currencies and the U.S. dollar to permit effective balance of payments adjustments and to eliminate the unfair advantage. China was cited as a currency manipulator five times by Treasury from May 1992 and July 1994 over such issues as its dual exchange rate system, periods of currency devaluation, restrictions on imports, and lack of access to foreign exchange by importers.

Many Members of Congress have expressed frustration that Treasury has not cited China as a currency manipulator in recent years.³⁶ Observers note that the language in the statute is somewhat unclear as to what policies constitute actual currency manipulation (and the extent of Treasury’s discretion to make such a determination). A 2005 Treasury Department report stated that such a determination under the guiding statute was “inherently difficult” because of the interplay of macroeconomic and microeconomic forces throughout the world, but said that such a designation could be made if the authorities of an economy “intentionally act to set the exchange rate at levels, or ranges, such that for a protracted period the exchange rate differs significantly from the rate that would have prevailed in the absence of action by the authorities.”³⁷

A 2005 Government Accountability Office (GAO) report on the Treasury Department’s currency reports stated that in order for Treasury to reach a positive determination of currency manipulation, a country would have to have a material global current account surplus and a significant bilateral trade surplus with the United States, and would have to be manipulating its currency with the “intent” of gaining a trade advantage. Some observers contend that Treasury will not cite China as a currency manipulator because it cannot prove that China’s currency policy is “intended” to give it an unfair trade advantage, since Chinese government intervention in currency markets attempts to slow or halt the appreciation of the RMB (as opposed to sharply depreciating the RMB). Other observers contend that as long as China continues to take steps to make its currency more flexible, Treasury will refrain from citing China. A third theory states that citing China as a currency manipulator would have no practical effect (especially since China and the United States are already engaged on this issue at the highest government level) other than to “name and shame,” a policy that could anger the Chinese government without producing any concrete results. However, some U.S. policy analysts and Members of Congress have strongly urged the Treasury Department to designate China as a currency manipulator in order to “name and shame it.” By doing so, it is argued, the United States would be sending a message that it was no longer willing to tolerate China’s currency policy and it could encourage other countries to rally behind the U.S. position (including within the IMF, which exercises surveillance of its members currency policies), and could possibly lead to multilateral meeting/agreement on global exchange rate realignment.³⁸ Several bills have been introduced in Congress over the past few years that would attempt to limit the Treasury Department’s discretion in taking action on undervalued currencies by requiring it to identify certain misaligned currencies, based on specific criteria, regardless of intent of the currency policy.

³⁴ As required under §3004 of Omnibus Trade and Competitiveness Act of 1988 (22 U.S.C. 5305).

³⁵ This language appears to have been taken from Article IV, §1 (iii) of the Articles of Agreement of the International Monetary Fund (IMF), which states that members should, among other things “avoid manipulating exchange rates or the international monetary system in order to prevent effective balance of payments adjustment or to gain an unfair competitive advantage over other members.”

³⁶ Many members sharply criticized the Department of the Treasury’s decision in April 2010 to delay issuing its first 2010 exchange rate report (usually issued in March or April). That report was issued on July 8, 2010 (after China made its announcement on currency reform), and it did not cite China (or any other country) for currency manipulation.

³⁷ U.S. Department of Treasury, *Semiannual Report on International Economic and Exchange Rate Policies, Appendix: Analysis of Exchange Rates Pursuant to the Act*, November 2005.

³⁸ Testimony by C. Fred Bergsten, Peterson Institute of International Economics, *Correcting the Chinese Exchange Rate: an Action Plan*, before the House Ways & Means Committee, March 24, 2010.

Legislative Proposals to Address Undervalued Currencies

Numerous bills have been introduced in Congress over the past several years that have sought to induce China (and other countries) to reform its currency policy or to address the perceived effects of that policy on the U.S. economy. For example, one bill introduced in the 108th Congress by Senator Schumer (S. 1586) sought to impose additional duties of 27.5% on imported Chinese products unless China appreciated its currency to market levels. The House approved a currency bill (H.R. 2378) in the 111th Congress and the Senate passed one (S. 1619) in the 112th Congress, though neither became law.

Over the past few years, some legislative proposals have sought to apply U.S. anti-dumping and countervailing duty measures to address the effects of China's undervalued currency, namely to treat it as an export subsidy (countervailing measures) or as a factor that is included in the determination of anti-dumping duties. This would likely increase U.S. countervailing and anti-dumping duties on certain imports from China. A major source of contention is whether such measures would be consistent with U.S. obligations in the World Trade Organization (WTO). Some contend that the WTO allows countries (under certain conditions) to administer their own trade remedy laws, and thus they argue that making currency undervaluation a factor in determining countervailing or anti-dumping duties would be consistent with WTO rules. Critics of such proposals counter that WTO rules do not specifically include currency undervaluation as a factor that can be used to implement trade remedy actions, and thus, such proposals, if enacted, might be challenged by China (and possibly other WTO members) as a violation of WTO rules.³⁹

Another major objective of various recent currency bills is to eliminate current provisions of U.S. trade laws that require the Treasury Department to identify countries that intentionally "manipulate" their currency. Treasury has not identified any country for manipulating its currency since 1994. Some bills have sought to create a process whereby Treasury would identify countries with currencies that were estimated to be fundamentally misaligned (based on certain criteria), regardless of intent. Such bills list a number of actions (some of which would be punitive) the U.S. government would be directed to take against certain "priority" countries.

Some supporters of currency legislation aimed at China hope that the introduction of such bills will induce China to appreciate its currency more rapidly. Opponents of the bills contend that such legislation could antagonize China and induce it to slow the rate of RMB appreciation. Another concern of opponents is that China might also retaliate against U.S. exports to China and/or U.S.-invested firms in China if such legislation became law.

³⁹ Of particular concern to some groups are proposals that would require the U.S. government to calculate the percentage level of a currency's misalignment or undervaluation, since there is no universally-accepted method of making such estimates (see discussion of this issue on page 15). A September 22, 2011, letter sent by a group of U.S. business organizations to Senators Reid and McConnell argued that any legislation that requires the Commerce Department to estimate the "true" exchange rate would "create a process that will be highly subjective and potentially politicized." A copy of the letter can be found at <http://businessroundtable.org/news-center/business-groups-letter-opposing-china-currency-legislation>.

Legislation in the 113th Congress

H.R. 1276: The Currency Reform for Fair Trade Act

H.R. 1276 was introduced by Representative Sander Levin on March 20, 2013. The bill is identical to the one he introduced in the 112th Congress (H.R. 639) and nearly identical to H.R. 2378, which passed the House during the 111th Congress by a vote of 284 to 123.

H.R. 1276 would seek to clarify certain provisions of U.S. countervailing duty laws (pertaining to foreign government export subsidies) that would allow the Commerce Department to consider a “fundamentally misaligned currency” as an actionable subsidy.⁴⁰ For example, it would clarify that a fundamentally undervalued currency could be treated by the Commerce Department as a benefit conferred by a foreign government to its exports.⁴¹ In addition, the bill seeks to clarify that, in the case of a subsidy relating to a fundamentally undervalued currency, the fact that the subsidy (i.e., the undervalued currency) may have also benefitted non-exporting firms (in addition to exporting firms), would not, for that reason alone, mean that the undervalued currency was not an actionable subsidy under U.S. countervailing duty law.⁴² The bill would direct the Commerce Department to use, if possible, data and methodologies utilized by the International Monetary Fund (IMF) to estimate real effective exchange rate undervaluation.

Factors that would be used by the Commerce Department to determine if a country’s currency is fundamentally undervalued for the purposes of U.S. countervailing duty laws would include (over an 18-month period): (1) protracted and large-scale intervention in currency markets; (2) a real effective exchange rate estimated to be undervalued by at least 5%; and (3) foreign asset reserves held by the government that exceed: (A) the amount needed to repay its debt obligations over the next year; (B) 20% of the nation’s money supply; and (C) the value of the country’s imports over the previous four months.

The bill would direct the Commerce Department to estimate the “subsidy” relating to a fundamentally undervalued currency for the purpose of imposing countervailing duties, which would be defined as the difference between a currency’s real effective exchange rate and its equilibrium real effective exchange rate.⁴³ The bill further directs Commerce (when appropriate) to use the simple average of the methodologies used by the IMF’s Consultative Group on Exchange Rates. If such data are not available from the IMF, Commerce would be directed to use

⁴⁰ A number of U.S. countervailing duty petitions have included claims that China’s currency policy is an actionable subsidy under U.S. countervailing duty law. Some petitioners have argued that when Chinese exporters are paid in dollars and subsequently exchange those dollars for Chinese RMB, the payment (RMB) they receive is larger than would occur under market conditions because of the Chinese government’s intervention to keep the RMB artificially low against dollar. This policy is viewed as constituting a financial contribution or price support. The Commerce Department has yet to include an undervalued currency as part of its countervailing duty investigation. In one case involving imported aluminum extrusions from China, which included a charge by petitioners that China’s undervalued currency was a countervailable subsidy, the Commerce Department stated that additional study of the issue was needed, given the unique nature of the alleged subsidy and the complex methodological issues that it raises under U.S. countervailing duty law. See for example, Department of Commerce, International Trade Administration, *Aluminum Extrusions from the People’s Republic of China: Initiation of Countervailing Duty Investigation*, Federal Register, Volume 75, Number 80, April 27, 2010, p. 22117.

⁴¹ The benefit would be defined as the difference between the amount of foreign currency received by the exporter from the transaction and the amount that would have been received if the currency was not undervalued.

⁴² In other words, the undervalued currency could be considered to be a measure that is contingent upon export performance.

⁴³ Real effective exchange rates are defined as a weighted average of bilateral exchange rates, adjusted for inflation.

generally accepted economic and econometric techniques and methodologies to measure the level of undervaluation.

S. 1114: The Currency Exchange Rate Oversight Reform Act of 2013

S. 1114 was introduced by Senator Sherrod Brown on June 7, 2013. It is essentially the same bill (S. 1619) that Senator Brown introduced in 2011 and was passed by the Senate on October 11, 2011. The bill would provide for the identification of fundamentally misaligned currencies and require action to correct the misalignment for certain “priority” countries. The bill would require the Treasury Department to issue a semiannual report to Congress on international monetary policy and currency exchange rates, which, in addition to several provisions under current law,⁴⁴ would include:

- a description of any currency intervention by the United States or other major economies or trading partners of the United States, or other actions undertaken to adjust the actual exchange rate relative to the U.S. dollar;
- an evaluation of the domestic and global factors that underlie the conditions in the currency markets;
- with respect to currencies of countries with significant trade flows with the United States and other major global currencies, a determination and designation by Treasury as to which of these are in fundamental misalignment;
- a list of currencies designated for “priority action”;
- an identification of the nominal value associated with the medium-term equilibrium exchange rate relative to the U.S. dollar for each currency listed for priority action; and
- a description of any consultations conducted, including any actions taken to eliminate the fundamental misalignment.

Treasury would be required to seek negotiations with countries designated for priority action. Factors used to determine priority countries would include those that are (1) engaging in protracted large-scale intervention in currency markets, particularly if accompanied by monetary sterilization measures; (2) engaging in excessive and prolonged accumulation of foreign exchange reserves for balance of payment (BOP) purposes; (3) introducing or modifying restrictions or incentives (for balance of payment purposes) on capital inflows and outflows that are inconsistent with the goal of achieving full currency convertibility; and (4) pursuing any other policy or action that the Treasury Secretary views as warranting designation for priority action.

If a country that has a currency designated for priority action fails to eliminate the fundamental misalignment within 90 days, the following would occur:

- In antidumping duty investigations, the Commerce Department would be required to factor in the estimated level of currency undervaluation when comparing the export price with the normal value (i.e., the exporter’s home market value) when determining the level of dumping that may have taken place. This could raise the level of anti-dumping duties imposed on imports.
- The President would be required to prohibit the procurement by the federal government of products or services from the country unless it is a party to the

⁴⁴ See §3004 of Omnibus Trade and Competitiveness Act of 1988 (22 U.S.C. 5305).

World Trade Organization's Government Procurement Agreement (GPA). China is negotiating to join the GPA, but is currently not a member.

- The Overseas Private Investment Corporation (OPIC) would be prohibited from approving any new financing (including insurance, reinsurance, or guarantee) with respect to a project located within the country. This provision would not affect China because OPIC is already prohibited by U.S. law from operating in China.
- The U.S. Executive Director at each multilateral bank would be directed to oppose the approval of any new financing to the government of a country, or for a project located within that country.
- The United States would request the IMF to hold special consultations with the country on ways to eliminate the fundamental misalignment.

If a country that has a currency designated for priority action fails to take steps to eliminate the fundamental misalignment within 360 days after its designation by Treasury, the following would occur:

- The U.S. Trade Representative (USTR) would be required to request consultations in the WTO (i.e., initiate a dispute settlement case) with the country regarding the consistency of the country's actions with its obligations in the WTO.
- The Treasury Secretary would be required to consult with the Board of Governors of the Federal Reserve System to consider undertaking remedial intervention in international currency markets in response to the fundamental misalignment of the designated currency and coordinating such intervention with other monetary authorities and the IMF.
- The Treasury Department would be required to oppose increasing the voting shares or representation in any international financial institution (such as the IMF) if the country in question would benefit from that change.

S. 1114 would also amend U.S. countervailing duty law to require the Commerce Department to initiate an investigation to determine whether currency undervaluation is providing, directly or indirectly, a countervailing subsidy if a petition is filed by an interested party and is accompanied by information supporting those allegations. The bill also seeks to clarify that, in the case of a subsidy relating to a fundamentally undervalued currency, the fact that the subsidy (i.e., the undervalued currency) may have also benefitted non-exporting firms would not, for that reason alone, mean that the subsidy could not be considered to be a measure that is contingent upon export performance. The bill includes waiver provisions for actions taken toward priority countries and a process for Congress to disapprove the waivers. S. 1114 would also add a provision to U.S. antidumping law that would require the Commerce Department to include whether a country has been designated as having a currency for priority action as a factor to be considered during a review of whether to change the designation of a non-market economy country to one that is a market economy country.⁴⁵

⁴⁵ Under U.S. antidumping proceedings regarding imports from a non-market economy country (such as China), the Commerce Department may determine that the normal value of the product in question cannot be determined. In such cases, Commerce uses price information from "surrogate countries" that have a market economy to determine the normal value of the imported products in question. Some analysts contend that this practice results in higher antidumping rates on imports from nonmarket economy countries than on those from market economy countries.

For the purposes of measuring a benefit conferred by a misaligned currency in a regular countervailing duty case, Commerce would be directed to compare the simple average of the real exchange rates derived from the application of the IMF's equilibrium real exchange rate approach and the macroeconomic balance approach to the official daily exchange rate, relying on IMF or World Bank data, if available, or other international organizations or national governments if such data are not available. For a countervailing duty case involving a fundamentally misaligned currency for priority action, S. 1114 would direct Commerce to calculate the benefit of a misaligned currency by comparing the nominal value associated with the medium-term equilibrium exchange rate of the currency of the exporting country to the official daily exchange rate. For the purposes of antidumping duty cases involving a fundamentally misaligned currency for priority action, S. 1114 would require the Department of Commerce to adjust the price used to establish the export price or constructed export price to reflect the fundamental misalignment of the currency of the exporting country. Fundamental misalignment is defined as a significant and sustained undervaluation of the prevailing real effective exchange rate, adjusted for cyclical and transitory factors, from its medium-term equilibrium level. The term "fundamental misalignment" and measurements of misalignment in the bill appear to have been largely drawn from the IMF's 2007 Decision on Bilateral Surveillance over Members' Policies (see text box below).

The IMF and Currency Misalignment

The IMF's 2007 Decision on Bilateral Surveillance over Members' Policies set new guidelines on exchange rate policies and identified certain developments that could affect global external stability, including exchange rate policies which in turn could trigger a thorough review by the IMF and possible consultations with an IMF member. Developments that could trigger a review include (1) protracted large-scale intervention in exchange markets; (2) official or quasi-official borrowing that is unsustainable or brings unduly high liquidity risks or excessive and prolonged accumulation of foreign assets for balance of payment purposes; (3) monetary and other financial policies that provide abnormal encouragement or discouragement to capital flows; (4) significant policies that restrict or provide incentives for capital flows or current transactions or payments; (5) large and prolonged current account deficits or surpluses; (6) large external sector vulnerabilities; and (7) fundamental exchange rate misalignment.

A fundamental exchange rate misalignment may trigger IMF review when (1) there is a misalignment between the prevailing real effective exchange rate and the level that would bring the underlying current account in line with the equilibrium current account; (2) the misalignment is significant; (3) the significant misalignment is expected to persist under established exchange rate policies; and (4) the significant and persistent misalignment is established beyond any reasonable doubt. The equilibrium real effective exchange rate is defined as one that is consistent with an underlying current account (adjusted for temporary factors) that is estimated to be in line with economic fundamentals, (such as productivity differentials, the terms of trade, permanent shifts in factor endowments, demographics, and world interest rates), over the medium term.⁴⁶

The Obama Administration's Position and Policies

President Obama stated in February 2010 that China's undervalued currency puts U.S. firms at a "huge competitive disadvantage," and he pledged to make addressing China's currency policy a top priority.⁴⁷ At a news conference in November 2011, President Obama stated that China

⁴⁶ IMF, *Challenges to the International Monetary System: Rebalancing Currencies, Institutions, and Rates*, Presentation by Mr. Takatoshi Kato, September 30, 2011.

⁴⁷ The White House, *Remarks by the President at the Senate Democratic Policy Committee Issues Conference*, February 3, 2010.

needed to “go ahead and move towards a market-based system for their currency” and that the United States and other countries felt that “enough is enough.”⁴⁸

Administration officials have welcomed greater congressional involvement on the China currency issue as long as legislative proposals do not violate U.S. WTO obligations and do not complicate ongoing bilateral and multilateral negotiations with China on the issue. The Administration did not publicly indicate whether it supported or opposed the House-passed version of H.R. 2378 in the 111th Congress. During considering of S. 1619 by the Senate in October 2011, an Administration official stated:

We share the goal of the legislation in taking action to ensure that our workers and companies have a more level playing field with China, including addressing the undervaluation of their currency, an issue that I’ve spoken about and certainly Secretary Geithner and others have spoken about. Aspects of the legislation do, as I’ve said, raise concerns about consistency with our international obligations, which is why we’re in the process of discussing with Congress those issues. And if this legislation were to advance, we would expect those concerns to be addressed.⁴⁹

The Obama Administration has sought to directly engage China on the currency issue through the Strategic & Economic Dialogue (S&ED) and the Joint Commission on Commerce and Trade (JCCT).⁵⁰ At the end of the May 2011 S&ED session, then Secretary of the Treasury Tim Geithner stated: “We hope that China moves to allow the exchange rate to appreciate more rapidly and more broadly against the currencies of all its trading partners. And this adjustment, of course, is critical not just to China’s ongoing efforts to contain inflationary pressures and to manage the risks that capital inflows bring to credit and asset markets, but also to encourage this broad shift to a growth strategy led by domestic demand.”⁵¹ At the May 2012 S&ED talks, Geithner acknowledged that China had made progress, stating: “China has acted to move toward a more flexible exchange rate system in which the market plays a greater role. It is intervening less in exchange markets. China is also moving to liberalize controls on the international use of its currency and on capital movements into and out of the country.”⁵² At the July 2013 S&ED session, China reiterated its commitment to move to a market-determined exchange rate.

In addition, the Obama Administration has sought to use multilateral channels, such as the Group of 20 (G-20) of leading economies and the IMF, as a means to boost international cooperation on external balances and exchange rate policies and to bring more pressure on China to appreciate its currency.⁵³ For example, on October 20, 2010, Secretary Geithner issued a proposal aimed at the G-20 meeting of finance ministers and central bank governors on October 23, 2010. The proposal contained three main points:⁵⁴

⁴⁸ The White House, *News Conference by President Obama*, November 14, 2011.

⁴⁹ The White House, *Press Briefing by Press Secretary Jay Carney*, October 12, 2011.

⁵⁰ China’s currency issue was also a major topic under the U.S.-China Strategic Economic Dialogue (SED) that was started under the Bush Administration in 2006.

⁵¹ U.S. Department of State, *Joint Closing Remarks for the Strategic and Economic Dialogue*, May 10, 2011, available at <http://www.state.gov/secretary/rm/2011/05/162969.htm>.

⁵² Department of the Treasury, Press Release, May 4, 2012, at <http://www.treasury.gov/press-center/press-releases/Pages/tg1566.aspx>.

⁵³ The multilateral approach may also act as an inducement for China to reform its currency policies. If other economies (especially Asia) agree not to intervene in currency markets to prevent their currencies from appreciating (or depreciate them to gain a competitive edge against Chinese exporters), China might agree to quicken the pace of currency appreciation and reform. If China went ahead and appreciated its currency, other Asian economies might do the same. This might help minimize Chinese concerns that an appreciating currency would disrupt its export sector.

⁵⁴ Department of Treasury, *Dear G-20 Colleagues Letter*, October 20, 2010.

- G-20 countries should commit to taking steps to reduce external imbalances (both surpluses and deficits) below a specified share of GDP over the next few years.
- G-20 countries should commit to refrain from exchange rate policies designed to achieve competitive advantage by either weakening their currency or preventing appreciation of an undervalued currency. G-20 emerging market countries with significantly undervalued currencies (and adequate precautionary foreign exchange reserves) need to allow their exchange rates to adjust fully over time to levels consistent with economic fundamentals. G-20 advanced economies should work to ensure against excessive volatility and disorderly movements in exchange rates.
- The G-20 should call on the IMF to assume a special role in monitoring progress on these commitments and should publish a semiannual report assessing progress the G-20 countries have made to achieve these goals.

China and a number of other G-20 members, though supporting efforts to rebalance the global economy, opposed the idea of using numerical targets.

In February 2013, the G-7 finance ministers and central bank governors issued a statement reaffirming their “longstanding commitment to market-determined exchange rates” and that fiscal and monetary policies would remain oriented towards meeting domestic objectives, and that members would not target exchange rates. They noted that members agreed that excessive volatility and disorderly movements in exchange rates can have adverse implications for economic and financial stability.⁵⁵

An Economic Analysis of the Effects of China’s Currency on the U.S. Economy

This section examines a number of issues pertaining to the effects of China’s undervalued currency on the U.S. economy. The economic effects on the Chinese economy of an undervalued currency are examined later in the report.

What Is the RMB’s “True Value”? Can it Be Accurately Estimated?

A major question raised by U.S. policymakers is: what would the RMB’s exchange rate with the dollar (and other currencies) be if China allowed its currency to float freely in international markets and did not intervene to affect the RMB’s value and how does this compare to the current rate of exchange?⁵⁶ Such a question attempts to ascertain to what degree the RMB is misaligned or undervalued against the dollar. Several economic studies have been issued over the years that have attempted to estimate the degree of the RMB’s undervaluation against the dollar with

⁵⁵ Statement by G7 Finance Ministers and Central Bank Governors, February 12, 2013, at <http://www.g8.utoronto.ca/finance/fm130212.htm>.

⁵⁶ This is often referred to as the real or equilibrium exchange rate and is broadly based on assumptions of what exchange rates would be predicted to be in order to be consistent with a country’s fundamental macroeconomic conditions.

varying results. For example, four separate studies issued in 2009 concluded that the RMB was undervalued against the dollar by rates of 12%,⁵⁷ 25%,⁵⁸ 40%⁵⁹, and 50%,⁶⁰ respectively.

A 2006 Department of the Treasury report describes a number of challenges that arise from attempting to use economic models to predict market exchange rates. It notes that there is no single model that accurately explains exchange rate movements, that such models rarely, if ever, incorporate financial market flows, and that their conclusions can vary considerably, based on the variables used. However, the report stated that examining such models can produce useful information in understanding exchange rate movements if they focus only on serious misalignments; use real effective, not bilateral, exchange rates; utilize several different models, recognizing that no one model will provide precise answers; focus only on protracted misalignments where currency adjustments are not taking place; supplement judgments about misalignment with analysis of empirical data, indicators, policies, and institutional factors; and verify whether there are any market-based reasons for a currency's misalignment.⁶¹

The IMF appears to largely follow the approach outlined by the Treasury Department's report. The IMF's Consultative Group on Exchange Rates uses three different methodologies for its surveillance and assessment of the exchange rate regimes of its members, including an equilibrium real exchange rate (ERER) approach, an external sustainability (ES) approach, and the macroeconomic balance (MB) approach.⁶² In July 2011, the IMF stated that it believed "that the renminbi remains substantially below the level consistent with medium-term fundamentals." For the first time, the IMF made public its estimates of the RMB's undervaluation, which included 3% under the ERER approach, 17% under the ES approach, and 23% under the MB approach.⁶³ However, an IMF report that described its three exchange rate methodologies cautioned:

While adopting different empirical methodologies goes some way towards strengthening the robustness of exchange rate assessments, it should be recognized that such assessments are unavoidably subject to large margins of uncertainty. These relate to a number of factors, such as the potential instability of the underlying macroeconomic links, differences in these links across countries, significant measurement problems for some variables, as well as the imperfect "fit" of the models. Some of these problems may be more severe for emerging

⁵⁷ Reisen, Helmut, *On the Renminbi and Economic Convergence*, December 17, 2009, available at <http://www.voxeu.org/index.php?q=node/4397>.

⁵⁸ Rodrick, Dani, *Making Room for China in the World Economic*, December 17, 2009, available at <http://www.voxeu.org/index.php?q=node/4399>.

⁵⁹ Cline, William R. and John Williamson, 2009 Estimates of Fundamental Equilibrium Exchange Rates, Peterson Institute for International Economics, Policy Brief PB09-10-2, June 2009, available at <http://www.iie.com/publications/pb/pb09-10.pdf>.

⁶⁰ Harvard Business School, *The End of Chimerica*, by Niall Ferguson and Moritz Schularick, Working Paper 10-937, October 2009, available at <http://www.hbs.edu/research/pdf/10-037.pdf>.

⁶¹ U.S. Treasury Department, *Report on International Economic and Exchange Rate Policies*, December 2006, Appendix II.

⁶² The ERER approach estimates an equilibrium real exchange rate for each country as a function of medium-term fundamentals, such as the net foreign asset (NFA) position of the country, relative productivity differential between the tradable and non-tradable sectors, and the terms of trade. The ES approach calculates the difference between the actual current account balance and the balance that would stabilize the NFA position of the country at some benchmark level. The MB approach calculates the difference between the current account balance projected over the medium term at prevailing exchange rates and an estimated equilibrium current account balance, or "CA norm." See International Monetary Fund, *Methodology for CGER Exchange Rate Assessments*, November 8, 2006.

⁶³ International Monetary Fund, *People's Republic of China, 2011 Article IV Consultation*, July 2011, p.18.

market economies, where structural change is more likely to play an important role and where limitations in terms of data availability and length of sample are more acute.⁶⁴

In July 2012, the IMF declared that: “The renminbi is assessed to be moderately undervalued, reflecting a reassessment of the underlying current account, slower international reserves and in accumulation, and past real effective exchange rate appreciation.”⁶⁵ The IMF gave a range of the RMB’s undervaluation (described as the difference between the real effective exchange rate and the rate that would be “consistent with fundamentals and desirable policies”) of 5%-10%.⁶⁶ In May 2013, the IMF repeated its assessment that the RMB remained moderately undervalued against a basket of currencies.⁶⁷

Most studies of the RMB’s projected market value against the dollar have involved one-time estimates made for a given period of time and thus may not reflect fundamental economic changes that may have subsequently occurred, which in turn would affect estimates of the RMB’s equilibrium exchange rate with the dollar in other years. For example, a one-time study on China’s exchange rate in 2009 will not reflect any change (appreciation or depreciation) in the currency that has occurred since the study was done. One exception to these limitations is partially addressed by work done by William R. Cline with the Peterson Institute for International economics, who has made estimates of the equilibrium exchange rates for a number of countries, including China, from 2008 to 2013 on a semiannual basis.⁶⁸

Cline uses the fundamental equilibrium exchange rate (FEER) method to estimate exchange rates. One of the assumptions that he uses is that current account balances around the world are temporarily out of line with their “fundamental” value. Once an estimate has been made of what the fundamental current account balance should be, one can calculate how much the exchange rate must change in value to achieve that current account adjustment. To calculate the level of misevaluation for one country under this method, estimates of how far exchange rates for every country are out of equilibrium, including countries with floating exchange rates, must be made.

One of the main sources of contention in FEER estimates is choosing an “equilibrium” current account balance for each country. Estimates of the RMB’s undervaluation are typically defined as the appreciation that would be required for China to attain “equilibrium” in its current account balance. But there is no consensus based on theory or evidence to determine what equilibrium would be, so a judgmental approach is used. Cline determines his own current account targets for different countries—for China the target is a current account surplus of no more than 3% of GDP while the target for the United States is a current account deficit that is no greater than 3% of GDP. The estimates of the RMB’s undervaluation made by Cline utilize actual and projected data (such as GDP growth and current account balances) from the IMF’s World Economic Outlook in order to calculate an equilibrium exchange rate. For example, Cline’s May 2013 study used the IMF’s projection for China’s current account surplus as a percent of GDP in 2018 (4.0%) and estimates how much the RMB would need to appreciate against the dollar to obtain a current account surplus target goal that is 3% of GDP. As indicated in **Figure 8**, Cline’s estimates of the amount of appreciation the RMB would need to obtain equilibrium (i.e., a current account surplus

⁶⁴ International Monetary Fund, *Methodology for CGER Exchange Rate Assessments*, November 8, 2006, pp. 4-5.

⁶⁵ <http://www.imf.org/external/pubs/ft/scr/2012/cr12195.pdf>

⁶⁶ IMF, *Pilot External Sector Report*, July 2, 2012, at <http://www.imf.org/external/np/pp/eng/2012/070212.pdf>.

⁶⁷ IMF, *Transcript of IMF Press Conference at the Conclusion of the 2013 Article IV Consultation Discussions with China*, May 29, 2013.

⁶⁸ The semi-annual series of estimates of FEERs was coauthored with John Williamson until his retirement at the end of 2012.

of 3% of GDP) has fallen from a peak of 40.7% in December 2009 to 5.9% in October 2012; it rose to 6.0% for April 2013.

As noted earlier, Cline made FEER estimates relative to the dollar for a number of currencies, not just the RMB. His May 2013 study estimates the equilibrium level of the currencies of 33 countries plus the euro area. The top 10 countries with the most undervalued currencies as of April 2013 are listed in **Table 1** in ranking order.⁶⁹ The top five countries with the most undervalued currencies were Singapore (undervalued by 25.7%), Taiwan (18.8%), Sweden (13.4%), Japan (13.1%), and Switzerland (10.8%); China ranked ninth.

Table 1. Estimates of Currency Misalignment Against the Dollar in April 2013 for Selected Countries

(%)

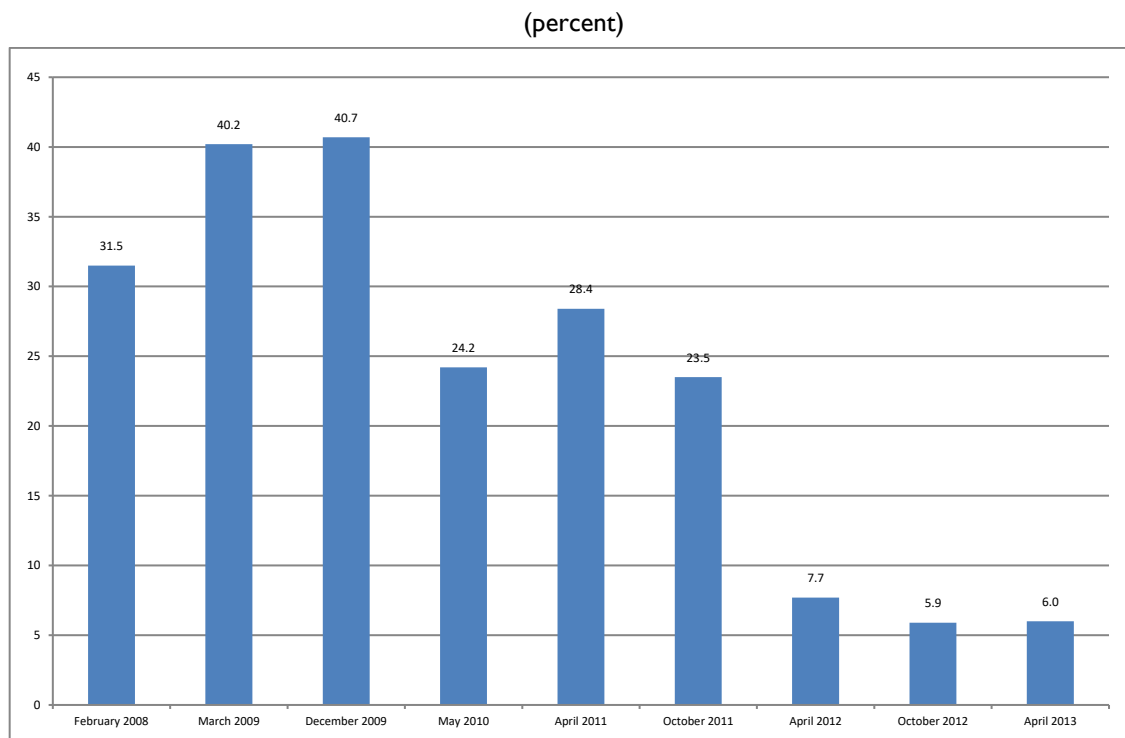
Country	Estimated Percent Change in Exchange Rate Needed to Obtain an FEER-Consistent rate with the Dollar (%)
Singapore	25.7
Taiwan	18.8
Sweden	13.4
Japan	13.1
Switzerland	10.8
Hong Kong	8.7
Malaysia	6.5
The Philippines	6.1
China	6.0
Thailand	4.5

Source: Cline, William R., Peterson Institute for International Economics, *Estimates of Fundamental Equilibrium Exchange Rates*, May 2013.

There is no universally accepted methodology for precisely determining a country's real market exchange rate. The economic conditions and assumptions that are used to determine "equilibrium" exchange rates change continuously. As a result, many analysts question their usefulness to U.S. policymakers, such as providing a precise U.S. goal for an appreciation of the RMB vis-a-vis dollar or for use in trade remedy legislation that would seek to offset the benefit ("subsidy") conferred by the RMB's undervaluation, such as through the use of countervailing or antidumping measures.

⁶⁹ Cline estimates found several currencies to be overvalued as well.

Figure 8. Timeline of Estimates of the RMB's Undervaluation Relative to the Dollar Using the FEER Method: 2008-2013



Source: William R. Cline, *Estimates of Fundamental Equilibrium Exchange Rates*, Peterson Institute for International Economics, various years.

The Debate over the Effects of Exchange Rate Appreciation on Trade Flows and the Deficit

Many policymakers might expect that if China significantly appreciated its currency, U.S. exports to China would rise, imports from China would fall, and the U.S. trade deficit would decline within a relatively short period of time. For example, C. Fred Bergsten from the Peterson Institute for International Economics argued in 2010 that a market-based RMB would lower the annual U.S. current account deficit by \$100 billion to \$150 billion.⁷⁰ But the issue of the possible effects of an RMB appreciation on the U.S. economy is complicated by the fact that there are short-term and long-term implications of RMB appreciation, and that exchange rates are but one of many factors that affect trade flows

To illustrate that exchange rates are only one factor that determine trade flows, one can look at the effect of the 21% RMB appreciation of the RMB to the dollar from July 2005 to July 2008 on U.S.-China trade flows. On the one hand, during this period U.S. imports from China increased by 39%, compared to a 92% increase from 2001 to 2004 (when the exchange rate remained constant).⁷¹ On the other hand, U.S. exports to China during the 2005-2008 period did not grow

⁷⁰ *Correcting the Chinese Exchange Rate: An Action Plan*, by C. Fred Bergsten, Peterson Institute for International Economics, Testimony before the Committee on Ways and Means, U.S. House of Representatives, March 24, 2010.

⁷¹ Some analysts contend that U.S. imports from China grew rapidly from 2001-2004, and slowed from 2005 to 2008, not because of the appreciation of the RMB, but because of changes to U.S. consumer demand relating to

as fast as during the 2001-2004 period (71% versus 81%).⁷² Despite the RMB's appreciation from 2005 to 2008, the U.S. trade deficit with China still rose by 30.1% (although the overall U.S. current account deficit declined by nearly 6%).⁷³ The appreciation of the RMB appears to have had little effect on China's overall trade balance from 2005 to 2008. During this time, China's merchandise trade surplus increased from \$102 billion to \$297 billion, an increase of 191%, and China's current account surplus and accumulation of foreign exchange reserves both increased by 165% over this period.

The J Curve Effect

Part of the problem in attempting to evaluate the effects of the RMB's appreciation is that it can take time (perhaps a few years) before changes in exchange rates are reflected in changes to prices of tradable goods and services, and, hence, result in changes to imports, exports, and trade balances. An appreciated RMB could actually worsen the U.S. trade deficit in the short run if the volume (demand) of imports from China did not decline at the same rate that prices increased (the so-called J-Curve effect). It would take time for U.S. consumers of higher-priced Chinese products to find lower-priced (non-Chinese) products or other alternatives and thus reduce overall demand for Chinese imports.⁷⁴ In addition, there would be a lag time in terms of the effects of an appreciated RMB on prices of Chinese products, since prices for many exports are set several months ahead of time in contracts. If an appreciated currency lowered prices for U.S. products, it could take time for increased Chinese demand to be signaled to U.S. producers and exporters and for them to boost production to meet the new demand. Over time, one would expect the effects of currency appreciation to affect the flow of bilateral trade and, possibly, produce a decrease in the bilateral trade imbalance (although the size of the overall U.S. trade deficit might not change because that is determined by a number of factors other than exchange rates).

The Role of Exchange Rate Pass-Through

Another factor to consider in evaluating the effects an RMB appreciation may have had on trade flows is to examine how price changes would be passed on or distributed. If the RMB appreciates against the dollar, not all of the price increase resulting from the appreciation may be passed on to the U.S. consumer. Some of it may be absorbed by Chinese laborers, producers, or exporters, and some by U.S. importers, wholesalers, or retailers. According to the U.S. Department of Labor, from 2003 to 2012 (year-end), the price index for U.S. imports from China rose by 6.1% (compared to a 19.2% rise in import prices for total U.S. imports of non-petroleum products) even the RMB appreciated in nominal terms by 33.7% over this period (see **Figure 9**).⁷⁵ This would suggest that only a small part of the increase in prices for Chinese products that might have resulted from the RMB's appreciation was passed on to U.S. consumers.⁷⁶ If prices are not

macroeconomic conditions.

⁷² Trade varied from year to year. In 2008, U.S. imports from China rose by 5.1% over the previous year, compared to import growth of 11.7% in 2007; however, U.S. exports over this period were up 9.5% in 2008 compared with an 18.1% rise in 2007.

⁷³ The current global economic slowdown led to a sharp reduction in U.S.-China trade in 2009; both U.S. exports to and imports from China fell sharply, though imports fell at a bigger rate. As a result, the U.S. trade deficit with China was down 14.8% over the previous year.

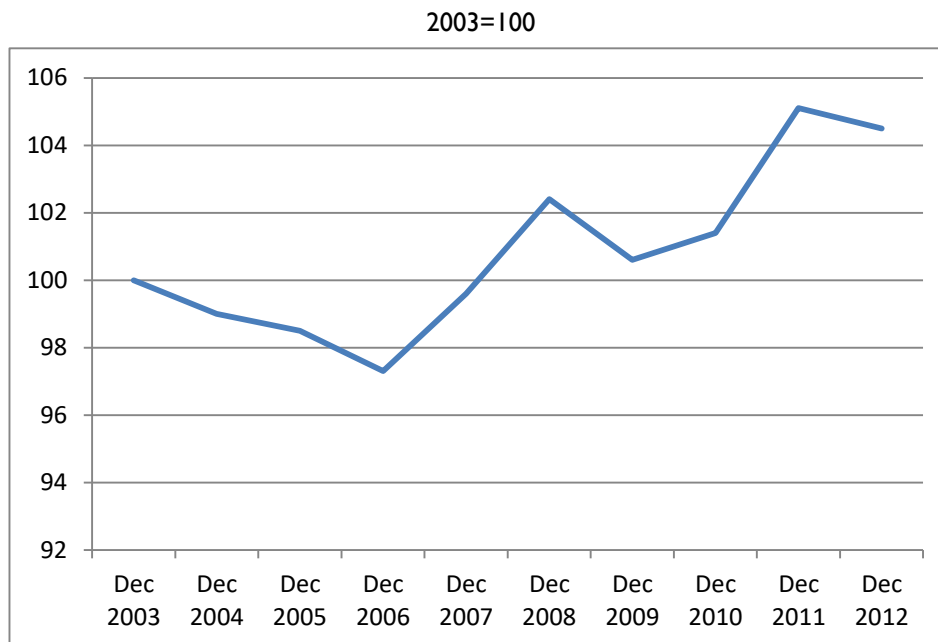
⁷⁴ Depending on the elasticity of demand for the product, some might be willing to pay the extra price and buy the same level as before, some might buy less of the product, and some might stop purchasing the product altogether.

⁷⁵ Bureau of Labor Statistics, *Import/Export Price Indexes*, Press Release, various issues.

⁷⁶ The disparity between changes in the RMB/dollar exchange rate and the changes in import prices of Chinese

completely passed through to consumers, then consumer demand for Chinese imports will fall less than if they were, all else equal.

Figure 9. Index of U.S. Import Prices of Commodities from China: December 2003-December 2012



Source: U.S. Bureau of Labor Statistics.

Note: 2003 is the first available year for data on import prices of Chinese commodities.

China's Role in the Global Supply Chain

The issue of exchange rate effects is further complicated by China's role as a major assembly center for multinational corporations. Many analysts contend that the sharp increase in U.S. imports from China over the past several years (and hence the growing bilateral trade imbalance) is largely the result of movement in production facilities from other (primarily Asian) countries to China. That is, various products that used to be assembled in such places as Japan, Taiwan, Hong Kong, etc., and then exported to the United States are now being made in China (in many cases, by U.S. and other foreign firms in China) and exported to the United States. According to Chinese data, foreign-invested firms in China account for over half of China's trade flows (both exports and imports). Such firms import raw materials, intermediate goods (such as components), and production machinery to China. One study of Apple Inc.'s iPod found that the product itself was assembled in China in factories owned by a Taiwanese company from components that were produced by numerous multinational corporations. The level of value added by Chinese workers who assembled the iPod in China was estimated to be small relative to the total cost of producing

products is even more pronounced when changes to the exchange rate are adjusted for inflation. Some of the costs may have been borne by Chinese producers or workers. Alternatively, China might have been able to boost efficiency, thus lowering costs, or production could have moved inland where labor is less expensive.

each unit (about 3%), and much smaller relative to the retail price of the unit sold in the United States.⁷⁷ Some analysts contend that, because of the high level of imported inputs that comprise a large share of China's exports, an appreciated RMB would have little effect on the prices of Chinese exports, and hence have little effect on bilateral trade flows. Others contend that, even if foreign-invested firms in China faced significantly higher costs because of an appreciated RMB, they would move production to another low-cost country, and thus, while the U.S. trade deficit with China decreased, the U.S. trade deficit with other countries would increase.

Underlying Macroeconomic Imbalances Are Unlikely to Disappear

By accounting identity, the overall trade deficit is equal to the shortfall between domestic saving and investment, while an overall trade surplus is equal to a surplus of domestic saving relative to investment. For many years, China has been a high-saving country that has run overall trade surpluses and the United States has been a low-saving country that has run overall trade deficits (for more discussion on this issue, see **Appendix**). China's use of an exchange rate peg and capital controls may have contributed to its high saving rate, but it is unlikely that movement to a floating exchange rate would eliminate the large disparity between U.S. and Chinese saving rates. Thus, it is likely that the United States would continue to be a net debtor and China would continue to be a net creditor if the RMB rose in value. If so, economic theory predicts the countries' bilateral trade imbalance would either persist or possibly be replaced by new bilateral imbalances with third countries.

Differing Opinions on Making RMB Appreciation a Top U.S. Trade Priority

As noted earlier, a number of U.S. economists have argued that China's undervalued currency has negatively affected the U.S. and global economies. However, other economists contend that, while an undervalued RMB may have distorted trade flows to some extent, it is not the most significant challenge to U.S. economic interests vis-à-vis China, and therefore, they argue, an appreciation of the currency by itself would do little to boost the U.S. economy. For example,

- Derek Scissors at the Heritage Foundation contends that appreciation of the RMB would have little impact on U.S. employment, stating it would create "a few thousand jobs at best."⁷⁸ He argues that the Chinese government's extensive use of industrial policies, namely subsidies and regulatory protection (such as state-sponsored monopolies), sharply limits imports of goods and services that compete with the state sector, which would remain unaffected even if the RMB were appreciated. He notes: "Guaranteed revenue and economies of scale make state firms modestly competitive as exporters when they would otherwise be uncompetitive. The real harm, however, is to imports of goods and services from the U.S. The degree of state predominance caps the total share available to all domestic private and foreign companies, leaving American producers in a vicious battle for permanently minor market segments. This is a far more stringent limitation than an undervalued currency."⁷⁹

⁷⁷ Communications of the ACM, *Who Captures Value in a Global Innovation Network? The Case of Apple's iPod*, March 2009.

⁷⁸ He also argues that reducing the federal budget deficit in the long run is the best way to boost employment and states that "in comparative importance, the value of the RMB is a footnote."

⁷⁹ Heritage Foundation, WebMemo, *Deadlines and Delays: Chinese Revaluation Will Still Not Bring American Jobs*, April 6, 2010.

- Michael Pettis with the Carnegie Endowment for International Peace makes a similar argument except that he contends that Chinese government “financial repression” policies have kept real returns to deposits low (and sometimes negative) in China in order to keep real lending rates artificially low (since they are set by the government, not market conditions) for Chinese firms (especially state-owned firms). He states that this constitutes a forced transfer of income from Chinese households to Chinese producers, which has led to over-investment and over-capacity by Chinese firms, with much of that excess capacity being exported. Pettis concludes that “as long as China continues to subsidize its production growth at the expense of household income, it will have difficulty increasing domestic demand and cutting its reliance on exports.”⁸⁰
- A study by the Federal Reserve Bank of San Francisco contends that, although the United States is running record trade deficits with China, the level of imports from China relative to U.S. GDP and U.S. personal consumption expenditures is relatively small.⁸¹ According to the study, U.S. imports of goods and services from China accounted for 2.5% of GDP in 2010, and these imports accounted for only 2.7% of U.S. personal expenditures for goods and services in 2010.⁸² The study estimated that on average for every one dollar that is spent in the United States on a product that is labeled “made in China,” 55 cents goes for services supplied in the United States, such as transportation, wholesale, and retail. As a result, according to the study, the actual value of goods and services originating in China totaled only 1.2% of U.S. personal expenditures in 2010; accounting for the level of imported intermediate inputs from China that are used to manufacture goods that are labeled “made in the USA” would raise this level to 1.9%. Some argue that the Federal Reserve Bank study illustrates that U.S. imports from China do not necessarily displace U.S. workers (and in fact, support U.S. jobs in a number of sectors) and that RMB appreciation would likely have little effect on the U.S. economy.

Winners and Losers of RMB Appreciation from an Economic Perspective

Economists generally oppose the use of policies (such as subsidies and trade protection) that interrupt market forces and distort the most efficient distribution of resources. A fixed or managed float exchange rate whose level is not adjusted when economic conditions change might be viewed as such a distortion.⁸³ Thus, from an economist’s perspective, adopting a more market-based currency would likely be a win-win situation for China, the United States, and the global economy as a whole, in the sense that it would lead to a more efficient allocation of resources in

⁸⁰ Carnegie Endowment for International Peace, *How Can China Reduce Its Reliance on Net Exports?*, June 24, 2010.

⁸¹ The Federal Reserve Bank of San Francisco Economic Letter, *The U.S. Content of “Made in China,”* August 8, 2011, at <http://www.frbsf.org/publications/economics/letter/2011/el2011-25.html>.

⁸² According to the U.S. Bureau of Economic Analysis, personal consumption expenditures is the primary measure of consumer spending on goods and services in the U.S. economy, accounting for about two-thirds of domestic final spending, and thus it is the primary engine that drives future economic growth. See U.S. Bureau of Economic Analysis website at <http://www.bea.gov/national/pdf/NIPAhandbookch5.pdf>.

⁸³ The standard economic model for determining whether countries should have a floating exchange rate is the “optimal currency area” model. According to this model, two countries can gain from fixed exchange rates if their goods and labor markets are highly interconnected and their business cycles are closely synchronized. By these criteria, China and the United States are unlikely to form an optimal currency area.

both countries (though not necessarily any effect on overall employment levels, as discussed below). From a policy perspective, it could be argued that China's current undervalued currency produces economic "winners and losers" in both countries, and therefore, an adjustment to that policy would produce a new set of economic "winners and losers." Although numerous factors affect global economic growth and trade flows, let us assume that an appreciation of the RMB produces a significant change in trade. What would the effects be for the U.S. economy?

Effect on U.S. Exporters and Import-Competitors

When exchange rate policy causes the RMB to be less expensive than it would be if it were determined by supply and demand, it causes Chinese exports to be relatively inexpensive and U.S. exports to China to be relatively expensive. As a result, U.S. exports and the production of U.S. goods and services that compete with Chinese imports fall, in the short run.⁸⁴ Many of the affected firms are in the manufacturing sector.⁸⁵ This causes the trade deficit to rise and reduces aggregate demand in the short run, all else equal. A market-based exchange rate could boost U.S. exports and provide some relief to U.S. firms that directly compete with Chinese firms.

Effect on U.S. Consumers and Certain Producers

According to economic theory, a society's economic well-being is usually measured not by how much it can produce, but how much it can consume. An undervalued RMB that lowers the price of imports from China allows the United States to increase its consumption through an improvement in the terms-of-trade. Since changes in aggregate spending are only temporary, from a long-term perspective, the lasting effect of an undervalued RMB is to increase the purchasing power of U.S. consumers. Imports from China are not limited to consumption goods. U.S. firms also import capital equipment and inputs from China to produce finished goods. An undervalued RMB lowers the price of these U.S. products, increasing their output, and thus making such firms more internationally competitive. An appreciation of China's currency could raise prices for U.S. consumers, lowering their economic welfare, meaning they have less money to spend on other goods and services. In addition, firms that use imported Chinese parts could face higher costs, making them relatively less competitive.

Effect on U.S. Borrowers

An undervalued RMB also has an effect on U.S. borrowers. When the United States runs a current account deficit with China, an equivalent amount of capital flows from China to the United States, as can be seen in the U.S. balance of payments accounts. This occurs because the Chinese central bank or private Chinese citizens are investing in U.S. assets, which allows more U.S. capital investment in plant and equipment to take place than would otherwise occur. Capital investment increases because the greater demand for U.S. assets puts downward pressure on U.S. interest rates, and firms are now willing to make investments that were previously unprofitable. This increases aggregate spending in the short run, all else equal, and also increases the size of the economy in the long run by increasing the capital stock. The effect on interest rates is likely to

⁸⁴ Many such firms contend that China's currency policy constitutes one of several unfair trade advantages enjoyed by Chinese firms, including low wages, lack of enforcement of safety and environmental standards, selling below cost (dumping) and direct assistance from the Chinese government.

⁸⁵ U.S. employment in manufacturing as a share of total non-agricultural employment fell from 31.8% in 1960, to 22.4% in 1980, to 13.1% in 2000, to 8.9% in 2010. This trend is much larger than the Chinese currency issue and is caused by numerous other factors, including productivity gains in manufacturing (such as through new technologies) and the rise of employment in the service sector.

be greater during periods of robust economic growth, when investment demand is strong, than when the economy is weak.

Private firms are not the only beneficiaries of the lower interest rates caused by the capital inflow (trade deficit) from China. Interest-sensitive household spending, on goods such as consumer durables and housing, is also higher than it would be if capital from China did not flow into the United States. In addition, a large proportion of the U.S. assets bought by the Chinese, particularly by the central bank, are U.S. Treasury securities, which fund U.S. federal budget deficits. According to the U.S. Treasury Department, China held about \$1.3 trillion in U.S. Treasury securities as of May 2013, making it the largest foreign holder of such securities.

The U.S. federal budget deficit increased sharply in FY2008 and FY2009, causing a sharp increase in the amount of Treasury securities that had to be sold. During this period, while the Obama Administration pushed China to appreciate its currency, it also encouraged China to continue to purchase U.S. securities, which China did.⁸⁶

Some analysts contend that, although an appreciation of China's currency could help boost U.S. exports to China, it could also lessen China's need to buy U.S. Treasury securities, which could push up U.S. interest rates. In the unlikely worst case scenario, if China stopped buying Treasury securities at a time when the U.S. budget deficit is unusually high, it could make private investors reevaluate their views on the sustainability of current fiscal policy.⁸⁷

Net Effect on the U.S. Economy

In the medium run, according to economic theory, an undervalued RMB neither increases nor decreases aggregate demand in the United States. Rather, it leads to a compositional shift in U.S. production, away from U.S. exporters and import-competing firms toward the firms that benefit from Chinese capital flows. Thus, it might be expected to have no medium- or long-run effect on aggregate U.S. employment or unemployment. As evidence, one can consider that since the 1980s, the U.S. trade deficit has tended to rise when unemployment was falling (and the economy was growing) and fall when unemployment was rising (and the economy was slowing). For example, the U.S. current account deficit peaked at 6.0% of GDP in 2006, when the unemployment rate was 4.6%, and fell to 2.7% of GDP in 2009, when the unemployment rate was 9.3%.

However, the gains and losses in employment and production caused by the trade deficit will not be dispersed evenly across regions and sectors of the economy: on balance, some areas will gain while others will lose. And by shifting the composition of U.S. output to a higher capital base, the size of the economy would be larger in the long run as a result of the capital inflow/trade deficit (although the returns from foreign-financed capital would not flow to Americans).

Although the compositional shift in output has no negative effect on aggregate U.S. output and employment in the long run, there may be adverse short-run consequences. If U.S. output in the trade sector falls more quickly than the increases in output of U.S. recipients of Chinese capital, aggregate U.S. spending and employment could temporarily fall. This is more likely to be a concern if the economy is already sluggish than if it is at full employment. Otherwise, it is likely

⁸⁶ From 2008 to 2010, China's holdings of U.S. Treasury securities increased by \$673 billion. However from 2010 to May 2013, China increased its holdings by only \$156 billion.

⁸⁷ China has expressed concern in recent years over the "safety" of its large holdings of U.S. debt. It has criticized the U.S. Federal Reserve's easy monetary policies to boost economic growth, such as quantitative easing (involving large-scale purchases of U.S. Treasury Securities). Chinese officials claim that such policies could lead to a sharp devaluation of the dollar against global currencies and boost U.S. inflation, which could diminish the value of China's dollar holdings.

that government macroeconomic policy adjustment and market forces can compensate for any decline of output in the trade sector by expanding other elements of aggregate demand. The U.S. trade deficit with China (or with the world as a whole) has not prevented the U.S. economy from registering high rates of growth in the past.

A Yale University study estimated that a 25% appreciation of the RMB would initially decrease U.S. imports from China and lead to greater domestic production in the United States and increased exports to China. However, the study estimated that benefits to the U.S. economy would be offset by lower Chinese economic growth (because of falling exports), which would diminish its demand for imports, including those from the United States. In addition, the RMB appreciation would increase U.S. costs for imported products from China (decreasing real wealth and real wages), and cause higher U.S. short-term interest rates. As a result, the sum effect of the 25% RMB appreciation was estimated to a negative effect on U.S. aggregate demand and output and result in a loss of 57,100 U.S. jobs—less than one-tenth of 1% of total U.S. employment.⁸⁸

Analysis by the IMF suggests that currency appreciation alone by China would yield limited benefits to the global economy (including the U.S. economy) unless it was accompanied by greater Chinese consumption and an expansion of the services sector. It estimated that a 20% RMB appreciation would boost U.S. economic growth by 0.05% to 0.07%, while a 20% RMB appreciation plus other reforms for rebalancing the Chinese economy would boost U.S. growth by over 0.15%.⁸⁹ The same study also estimated that a 20% RMB appreciation alone could reduce Chinese economic growth by a range of 2.0% to 8.8%, while combining RMB appreciation with reforms for rebalancing could have a range of outcomes from boosting growth by 1% to reducing it by 2%.

China's Perspective and Concerns: Economic Growth and Stability

Chinese officials argue that their currency policy is not meant to favor exports over imports, but instead to foster economic stability through currency stability. The policy reflects the government's goals of using exports as a way of providing jobs to Chinese workers and to attract FDI in order to gain access to technology and know-how. The Chinese government has stated on a number of occasions that currency reform is a long-term goal which will be implemented gradually. Officials have strongly condemned international pressure to induce China to appreciate the currency, arguing that it interferes with China's "sovereignty" to implement its own domestic economic policies. In 2009, (then) Chinese Premier Wen Jiabao was reported by Chinese media as complaining that "some countries demand the yuan's appreciation, while practicing various trade protectionism against China. It's unfair and actually limits China's development."

Despite the Chinese government's numerous pledges on currency reform, it has moved somewhat cautiously. Chinese officials view economic growth as critical to sustaining political stability, and thus appear very reluctant to implement policies that might disrupt the economy and cause widespread unemployment, which could cause worker unrest.⁹⁰ In addition, Chinese officials

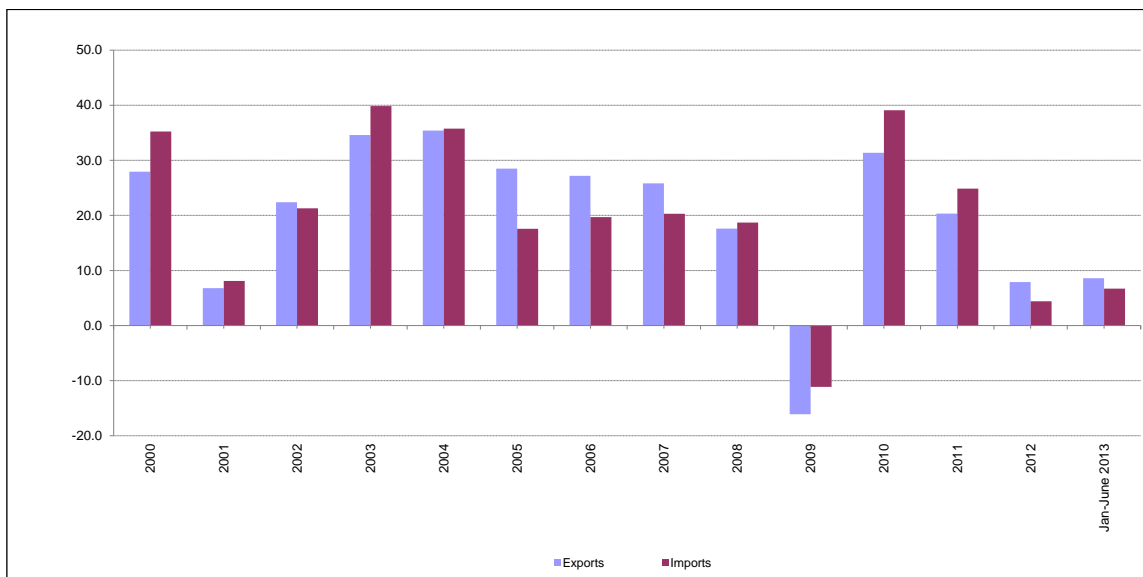
⁸⁸ Fair, Ray C., "Estimated Macroeconomic Effects Of A Chinese Yuan Appreciation," Cowles Foundation Discussion Paper 1755, March 2010.

⁸⁹ International Monetary Fund, *People's Republic of China, 2011 Article IV Consultation*, July 2011, p. 36.

⁹⁰ There have been numerous reports of labor unrest and strikes in different parts of China in 2010, mainly over pay issues. Chinese officials are concerned that an appreciation of the RMB could induce Chinese export producers to try to hold down wages to remain competitive, or could force them out of business, which could lead to more job losses and

reject assertions by some economists that China's currency policy undermines the global economy or that a sharp appreciation of the RMB is needed to boost global economic recovery. Instead, they contend, promoting rapid domestic growth is the most significant policy China can undertake to promote global economic recovery. They note that Chinese imports rose by 38.8% in 2010 (over the previous year) and by 23.9% in 2011, which contributed to global economic recovery in those years. They further note that export growth in 2012 and the first half of 2013 was significantly below historic rates (see **Figure 10**).⁹¹ In addition, they note, China's merchandise trade surplus fell each year from 2009 to 2011. In June 2013, Xinhua claimed that the yuan was nearing equilibrium against the dollar.⁹²

Figure 10. Change in China's Trade Flows: 2000-June 2013
(%)



Source: Global Trade Atlas using official Chinese statistics.

Note. Data for 2000-2012 are annual changes. Data for January-June 2013 are year-on-year changes.

The Effects of an Undervalued RMB on China's Economy

If the RMB is undervalued vis-à-vis the dollar, then Chinese exports to the United States are likely less expensive than they would be if the currency were freely traded, providing a boost to China's export industries. Eliminating exchange rate risk through a managed peg also increases the attractiveness of China as a destination for foreign investment in export-oriented production facilities. However, there are a number of potentially negative aspects to China's export growth strategy and currency policy.

- Overdependence on exporting (and fixed investment relating to exports) and FDI inflows made China particularly vulnerable to the effects of the global economic slowdown. Analysis by the IMF estimated that fixed investment related to

provoke more unrest.

⁹¹ Some recent media reports indicate that data on the level of Chinese exports in 2013 may be overstated because some entities in China may be filing fake export invoices in order to transfer capital to China.

⁹² Xinhua News Agency, June 7, 2013, at http://news.xinhuanet.com/english/indepth/2013-06/07/c_124830356.htm.

tradable goods plus net exports together accounted for over 60% of China's GDP growth from 2001 to 2008 (up from 40% from 1990 to 2000), which was significantly higher than in the G-7 countries (16%), the euro area (30%) and the rest of Asia (35%).⁹³

- An undervalued currency makes imports more expensive, hurting Chinese firms that import parts, machinery, and raw materials. Such a policy, in effect, benefits Chinese exporting firms (many of which are owned by foreign multinational corporations) at the expense of non-exporting Chinese firms. This may impede the most efficient allocation of resources in the Chinese economy. Resources that might go to other sectors, such as the service sector, are diverted to the export sector.
- If one considers an undervalued currency as a form of export subsidy, then China, in effect, is subsidizing American living standards by selling products that are less expensive than they would be under market conditions. This in effect lowers China's terms of trade—the level of imports that can be obtained through exports.⁹⁴ Chinese citizens, on the other hand, pay more for tradable goods, not only because imported goods are more expensive because of the de facto tariff an undervalued currency entails, but also because domestic competition is restricted as well. Rather than use its trade surpluses to purchase goods and services from abroad, China is forced, because of its need to maintain its peg to the dollar, to put a large share of its foreign exchange holdings into U.S. debt securities, which earn a relatively low return.
- The use of a pegged system greatly limits the ability of the central government to use monetary policy to control inflation. If Chinese banks raised interest rates in an effort to control inflation, overseas investors might try to shift funds to China (through illegal means) to take advantage of the higher Chinese rates. The Chinese government has had difficulty blocking such inflows of “hot money.” Such inflows force the government to boost the money supply to buy up the foreign currency necessary to maintain the targeted peg. Expanding the money supply contributes to easy credit policies by the banks, which has contributed to overcapacity in a number of sectors, such as steel, and speculative asset bubbles, such as in real estate.⁹⁵ In the past, the Chinese government has tried to use administrative controls, with limited results, to limit bank loans to sectors where overcapacity is believed to exist. In effect, a pegged currency induces the Chinese government to utilize inefficient and non-market financial policies for credit allocation, rather than a market-based system that would promote an efficient allocation of capital.

Although a rebalancing of China's economy, including the adoption of a market-based currency, would likely entail significant adjustment costs, it also would likely produce long-term benefits to the Chinese economy. For example, it could:

⁹³ Guo, Kai and Papa N'Diaye, *Is China's Export-Oriented Growth Sustainable*, IMF Working Paper, August 2009.

⁹⁴ The ultimate goal of trade is to obtain imports in exchange for exports. The more imports a country can obtain from a given level of exports, the better off it is materially. China appears to be willing to “subsidize” its exports in order to boost jobs in export-oriented industries. However, Chinese consumers are made worse off.

⁹⁵ The government can and has attempted to sterilize the increase of the money supply by forcing state banks to buy and hold government bonds.

- Boost China's term of trade by increasing the level of imports that can be purchased by its exports;
- Increase economic efficiency (and hence economic growth), by re-directing resources away from inefficient (and often subsidized) sectors of the economy to those that are more efficient and competitive;
- Lower prices for imported goods and services and expose more of the domestic economy to greater global competition, thus lowering prices for consumers and improving Chinese living standards;
- Improve the efficiency and competitiveness of many Chinese domestic firms (including those that produce only for the domestic market) by lowering prices for imported inputs, raw materials, and machinery, thus boosting their output;
- Expand the ability of the government to use monetary policies to control inflation and to allocate capital according to its most efficient use through a market-based credit system;
- Help alleviate the large disparities of economic development between the coastal regions of China (as well as growing income disparities throughout China) that have been driven in part by China's export growth strategy and are viewed by many analysts as posing a potential risk to stability;
- Reduce or eliminate a major source of tension between China and many of its trading partners, some of whom view China's undervalued currency and its use of subsidies as beggar-thy-neighbor policies that promote economic development in China at the expense of growth in other countries.

The great challenge for Chinese leaders, assuming that they are committed to greater economic reform and rebalancing the economy, would be to quickly generate new sources of economic growth and job opportunities in order to offset the decline of those sectors that would no longer be able to compete once preferential government policies (such as subsidies and an undervalued currency) are eliminated. However, some analysts contend that this rebalancing could prove difficult for China politically and could take several years to achieve. For example, according to Michael Pettis, reforming China's economic policies would have to involve political reforms because "eliminating the mechanisms by which Chinese policymakers can transfer income from households to manufacturers will reduce their control over the commanding heights of the economy, and it will sharply reduce the power and leverage the ruling party has over business and local governments."⁹⁶ On the other hand, China's economy has consistently generated annual growth rates near 10% in recent decades, making adjustment much easier.

Policy Options for the RMB and Potential Outcomes

If the Chinese were to allow their currency to float, it would be determined by private actors in the market based on the supply and demand for Chinese goods and assets relative to U.S. goods and assets. If the RMB appreciated as a result, this would boost U.S. exports and the output of U.S. producers who compete with the Chinese. The U.S. bilateral trade deficit would likely decline (but not necessarily disappear). At the same time, the Chinese central bank would no longer purchase U.S. assets to maintain the peg. U.S. borrowers, including the federal government, would now need to find new lenders to finance their borrowing, and interest rates in

⁹⁶ Pettis, Michael, *Sharing the Pain: The Global Struggle Over Savings*, Carnegie Endowment for International Peace, November 2009, p. 7.

the United States would rise. This would reduce spending on interest-sensitive purchases, such as capital investment, housing (residential investment), and consumer durables. The reduction in investment spending would reduce the long-run size of the U.S. capital stock, and thereby the U.S. economy. In the present context of a large U.S. budget deficit, some analysts fear that a sudden decline in Chinese demand for U.S. assets (because China was no longer purchasing assets to influence the exchange rate) could lead to a drop in the value of the dollar that could potentially destabilize the U.S. economy.⁹⁷

If the relative demand for Chinese goods and assets were to fall at some point in the future, the floating exchange rate would depreciate, and the effects would be reversed. Floating exchange rates fluctuate in value frequently and significantly.⁹⁸

A move to a floating exchange rate is typically accompanied by the elimination of capital controls that limit a country's private citizens from freely purchasing and selling foreign currency. The Chinese government maintains capital controls (and arguably one of the major reasons China opposes a floating exchange rate) because it fears a large private capital outflow would result if such controls were removed. This might occur because Chinese citizens fear that their deposits in the potentially insolvent state banking system are unsafe. If the capital outflow were large enough, a banking crisis in China could result and could cause the floating exchange rate to depreciate rather than appreciate.⁹⁹ If this occurred, the output of U.S. exporters and import-competing firms would be reduced below the prevailing level, and the U.S. bilateral trade deficit would likely expand. In other words, the United States would still borrow heavily from China, but it would now be private citizens buying U.S. assets instead of the Chinese central bank. China could attempt to float its exchange rate while maintaining its capital controls, at least temporarily. This solution would eliminate the possibility that the currency would depreciate because of a private capital outflow. While this would be unusual, it might be possible. It would likely make it more difficult to impose effective capital controls, however, since the fluctuating currency would offer a much greater profit incentive for evasion.

Another possibility is for China to maintain the status quo. Even without adjustment to the nominal exchange rate, over time the real rate would adjust as inflation rates in the two countries diverged. The Chinese central bank acquires foreign reserves by printing yuan to finance its trade surplus. As the central bank exchanged newly printed yuan for U.S. assets, prices in China would rise along with the money supply until the real exchange rate was brought back into line with the market rate.¹⁰⁰ This would cause the U.S. bilateral trade deficit to decline and expand the output

⁹⁷ For more information, see CRS Report R40770, *The Sustainability of the Federal Budget Deficit: Market Confidence and Economic Effects*, by Marc Labonte.

⁹⁸ Some economists argue that short-term movements in floating exchange rates cannot always be explained by economic fundamentals. If this were the case, then the floating exchange rate could become inexplicably overvalued (undervalued) at times, reducing (increasing) the output of U.S. exporters and U.S. firms that compete with Chinese imports. These economists often favor fixed or managed exchange rates to prevent these unexplainable fluctuations, which they argue are detrimental to U.S. economic well-being. Other economists argue that movements in floating exchange rates are rational, and therefore lead to economically efficient outcomes. They doubt that governments are better equipped to identify currency imbalances than market professionals.

⁹⁹ This argument is made in Morris Goldstein and Nicholas Lardy, "A Modest Proposal for China's Renminbi," *Financial Times*, August 26, 2003. Alternatively, if Chinese citizens proved unconcerned about keeping their wealth in Chinese assets, the removal of capital controls could lead to a greater inflow of foreign capital since foreigners would be less concerned about being unable to access their Chinese investments. This would cause the exchange rate to appreciate.

¹⁰⁰ To some extent, China can reduce the effects of the accumulation of foreign reserves on the money supply through credit controls, although this is unlikely to be completely effective.

of U.S. exporters and import-competing firms. This real exchange rate adjustment would only occur over time, however, and pressures on the U.S. trade sector would persist in the meantime.

None of the solutions guarantee that the bilateral trade deficit would be eliminated. China is a country with a high saving rate, and the United States is a country with a low saving rate; it is not surprising that their overall trade balances would be in surplus and deficit, respectively. As the **Appendix** discusses, many economists believe that these trade imbalances will persist as long as underlying macroeconomic imbalances persist. At the bilateral level, it is not unusual for two countries to run persistently imbalanced trade, even with a floating exchange rate. If China can continue its combination of low-cost labor and rapid productivity gains, which have been reducing export prices in yuan terms, its exports to the United States are likely to continue to grow regardless of the exchange rate regime, as evidenced by the 21% appreciation of the RMB from 2005 to 2008, which did not lead to any reduction in the trade deficit over that period.

Conclusion

Congressional concerns over China's currency policy date back to at least 2003. Since that time, the RMB has appreciated significantly against the dollar: 34% on a nominal basis and 42% on a real basis through June 2013. China's current account surplus as a percent of GDP, in dollar terms and as a percent of GDP, has sharply declined significantly in recent years. In 2011, the IMF evaluated the RMB to be substantially undervalued, but in 2012 and 2013, the RMB was estimated to be moderately undervalued. These factors appear to have somewhat diminished the importance of China's currency policy as a priority trade issue for some in Congress.¹⁰¹ In addition, China has become viewed by some Members as one of several countries that are intervening to hold down the value of their currencies. For example, recent Japanese monetary policies to boost the economy have led some Members and U.S. business groups to accuse Japan of manipulating its currency. Finally in recent years, a number of other Chinese economic policies and practices have been identified by some Members as posing significant threats to U.S. economic interests. These include Chinese cyber-enabled theft of U.S. trade secrets and business confidential information, extensive economic losses incurred by U.S. intellectual property-intensive firms from Chinese infringement of U.S. intellectual property rights, and China's widespread use of industrial policies to subsidize priority domestic firms, while imposing trade and investment barriers to limit foreign market access in China.

The lingering effects of the global economic slowdown (especially in Europe and the United States) have suppressed global demand for Chinese products.¹⁰² The World Bank, IMF, and other global economic institutions have warned China that the policies it has employed to promote high levels of gross fixed investment, financed largely by easy credit policies, are not sustainable and may ultimately seriously weaken China's financial sector by significantly increasing the level of non-performing loans. They have urged China to implement policies to make private consumption the main source of China's economic growth and to eliminate policies that prevent markets from determining the most efficient allocation of resources (such as capital) in the economy in order to ensure that healthy economic growth is sustained over the long term. Reform of the financial sector, including the adoption of a market-determined exchange rate system, would likely play a critical role in this process. Chinese officials have acknowledged the need to

¹⁰¹ Others in Congress, however, continue to view the large and growing U.S. trade deficit with China, and the loss of U.S. manufacturing jobs, to be largely caused by China's currency manipulation.

¹⁰² From January-May 2013, U.S. imports from China were up by only 3.1% year-on-year.

make such reforms and have announced a number of policies to that end.¹⁰³ For example, during the July 2013 S&ED, Chinese officials stated that they would continue to implement policies to boost private consumption, such as raising social security and employment spending by two percentage points of total fiscal spending by the end of 2015. The implementation of comprehensive economic reforms and a rebalancing of the Chinese economy, if achieved, would likely lead to a significant improvement in U.S.-China commercial relations. For example, as long as the Chinese government continues to maintain a managed currency peg, then the RMB would be assumed by many analysts to be undervalued, regardless of current economic conditions. If the RMB were allowed to be traded freely, without intervention by the Chinese government, then the exchange rate of the RMB against the dollar and other currencies would more likely be viewed as being determined by market forces and hence not undervalued.

¹⁰³ See CRS Report RL33534, *China's Economic Rise: History, Trends, Challenges, and Implications for the United States*, by Wayne M. Morrison.

Appendix. Indicators of U.S. and Chinese Economic Imbalances

The issue of rebalancing economic growth by both the United States and China has been a central focus of the U.S.-China Strategic and Economic Dialogue (S&ED) talks over the past two years. A joint statement issued at the May 2011 S&ED meeting noted that

Since the second meeting of the Strategic and Economic Dialogue in May 2010, the economic recoveries in the United States and China have strengthened due to continued forceful stimulus measures undertaken by both countries, contributing to an improving outlook for the global economy. The two countries have also made progress on their commitments to promote more sustainable and balanced growth. To secure these gains and address potential challenges to the global outlook, we pledge to enhance macroeconomic cooperation to ensure that the global recovery is durable and promotes steady job growth, and to firmly establish strong, sustainable, and balanced growth.¹⁰⁴

The global financial crisis and subsequent GDP decline among many countries have resulted in new scrutiny by many economists of “global imbalances,” namely the disparities in savings and investment levels among various countries (i.e., some countries save too little and some too much relative to their investment needs), and subsequent current account imbalances that have resulted (i.e., countries where domestic savings exceed investment run trade surpluses, and countries where domestic investment exceeds saving run current account deficits). China and the United States are not unique in having these imbalances—Japan, Germany, and other East Asian countries are other examples of high savers, while southern and eastern European countries are other examples of high borrowers. Nevertheless, the United States and China have come under particular scrutiny because of their relative overall size (they are the world’s two largest economies) and the relative size of their saving, investment, and trade imbalances. Some analysts also claim that China’s exchange rate policy is preventing other East Asian countries from adjusting, because those countries are unwilling to allow their currencies to appreciate and lose export market share to China unless the RMB appreciates too.

Many economists contend such imbalances were a major cause of the current global economic slowdown. For example, high savers, such as China, loaned their money to low savers, such as the United States, which helped keep real U.S. interest rates low and contributed to the bubble in the U.S. housing market and subsequent financial crisis. Many of the high savings countries (especially those in Asia) heavily relied on exporting as a source of their economic growth and thus were significantly impacted when global demand for imports sharply fell.¹⁰⁵ As a result, many economists have called for economic restructuring among many of the world’s major economies, especially the United States and China. Fundamental restructuring of this sort would take time, and if not well coordinated, could deepen the global output gap in the short run. For example, if low saving countries attempt to increase their saving rate (e.g., by reducing their government budget deficits) at a time of high unemployment, and high saving countries do not simultaneously increase their consumption, then worldwide demand could decline and cause unemployment to rise further in the short run.

¹⁰⁴ U.S. Department of the Treasury press release, Third Meeting of the U.S.-China Strategic & Economic Dialogue Joint U.S.-China Economic Track Fact Sheet, May 10, 2011. Available at <http://www.treasury.gov/press-center/press-releases/Pages/tg1170.aspx>.

¹⁰⁵ For an overview of this argument, see Blanchard, Olivier and Gian Maria Milesi-Ferretti, “Global Imbalances: In Midstream?” IMF Staff Position Note, December 22, 2009.

This section provides an overview of some of the unique differences between the economies of the United States and China that have played a role in global imbalances and examines if there has been any rebalancing by the U.S. and Chinese economies in recent years.

Current Account Balances, Savings, and Investment

The level of U.S. gross savings is far below total U.S. investment, indicating that the United States must borrow capital abroad to meet its investment needs. By definition, domestic savings minus gross investment (from domestic and foreign sources) equals the current account balance.¹⁰⁶ Nations that do not save enough to meet domestic investment needs run current account deficits and those that save more than they need for domestic investment run current account surpluses.¹⁰⁷ In 2012, the ratio of U.S. gross domestic savings to gross investment was 77.3%, the lowest among the world's major economies. On the other hand, the ratio for China was 105.7% (see **Table A-1**).

In nominal dollar terms, the United States had the world's largest current account deficit in 2012 at \$475 billion, while China had the largest current account surplus at \$192 billion (see **Figure A-1**). These balances were also significant as a share of GDP: -3.0% for the United States and 2.3% for China (see **Figure A-2**).¹⁰⁸ Some "rebalancing" has taken place during and after the global recession. The U.S. current account deficit has declined from its peak 6.0% in 2006 because domestic investment spending has fallen and the private savings has risen.¹⁰⁹ In addition, the U.S. federal budget deficit as a percent of GDP fell from 10.1% in FY2009 to 7.0% in FY2012, and is projected to decline to 4.0% in FY2013, according to the Congressional Budget Office (CBO).¹¹⁰ What remains to be seen is how much of this rebalancing is cyclical, and will be reversed when the U.S. economy returns to full employment, and how much of it is permanent. The IMF projects China's current account balance as a percent of GDP will increase over the next six years to 4.3% in 2018, but still significantly lower than its historical high of 10.1% in 2007. The U.S. current account deficit as a percent of GDP is projected by the IMF to grow to 3.5% of GDP in 2018, also much lower than its historic peak of 6.0% in 2006.

Despite the rebalancing that has already taken place, some economists would not consider either country to have reached a position that is sustainable in the long run. Before the late 1990s, the United States had never had a current account deficit of 3% of GDP. And even with China's reduced current account surplus and the diminished U.S. current account deficit over the past few years, China's net holdings of foreign assets and the U.S. net foreign debt continue to grow. Likewise, the decline in China's current account surplus was caused by a more rapid decline in China's exports than imports during the worldwide economic downturn—when worldwide growth picks up again and reaches pre-crisis levels, that trend could reverse.

¹⁰⁶ The current account balance is the broadest measurement of a country's financial flows. It includes the balances for trade in goods and services, net income (investment income and compensation for overseas workers), and net unilateral transfers.

¹⁰⁷ A current account deficit also reflects that a country consumes more than it produces, while a current account surplus indicates that a country produces more than it consumes.

¹⁰⁸ The U.S. current account deficit as a percent of GDP fell in 2008 and 2009. China's current account surplus as a percent of GDP fell each year from 2007 to 2009.

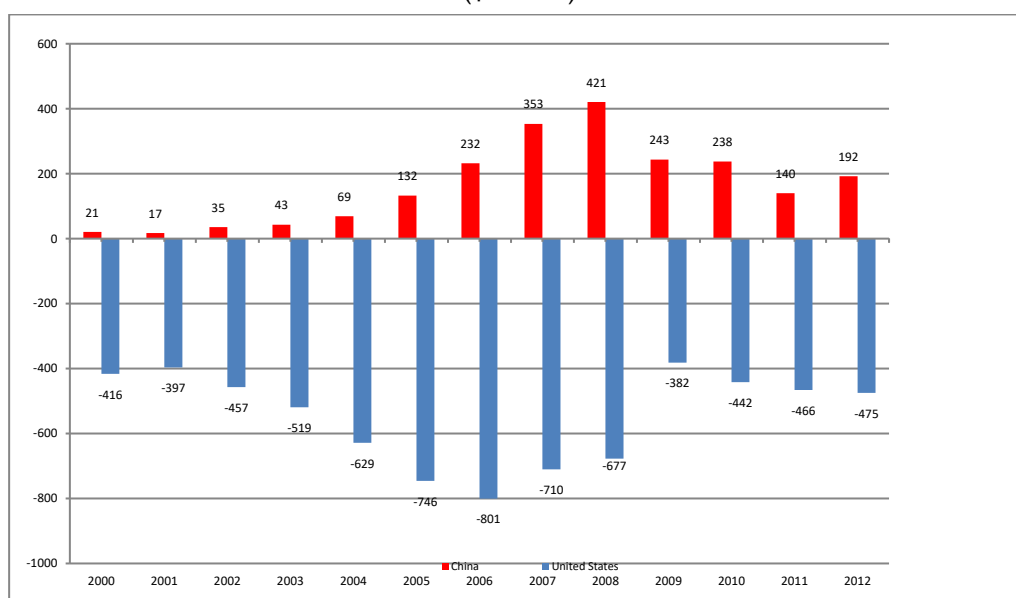
¹⁰⁹ Gross private savings as a percent of GDP rose from 14.2% in 2007 to 18.2% in 2010. Source: Bureau of Economic Analysis.

¹¹⁰ CBO, *Updated Budget Projections: Fiscal Years 2013 to 2023*, May 14, 2013, at <http://www.cbo.gov/publication/44172>.

Table A-I. Ratio of Gross National Savings to Gross Investment and Current Account Balances as a Percent of GDP for Selected Major Economies: 2012

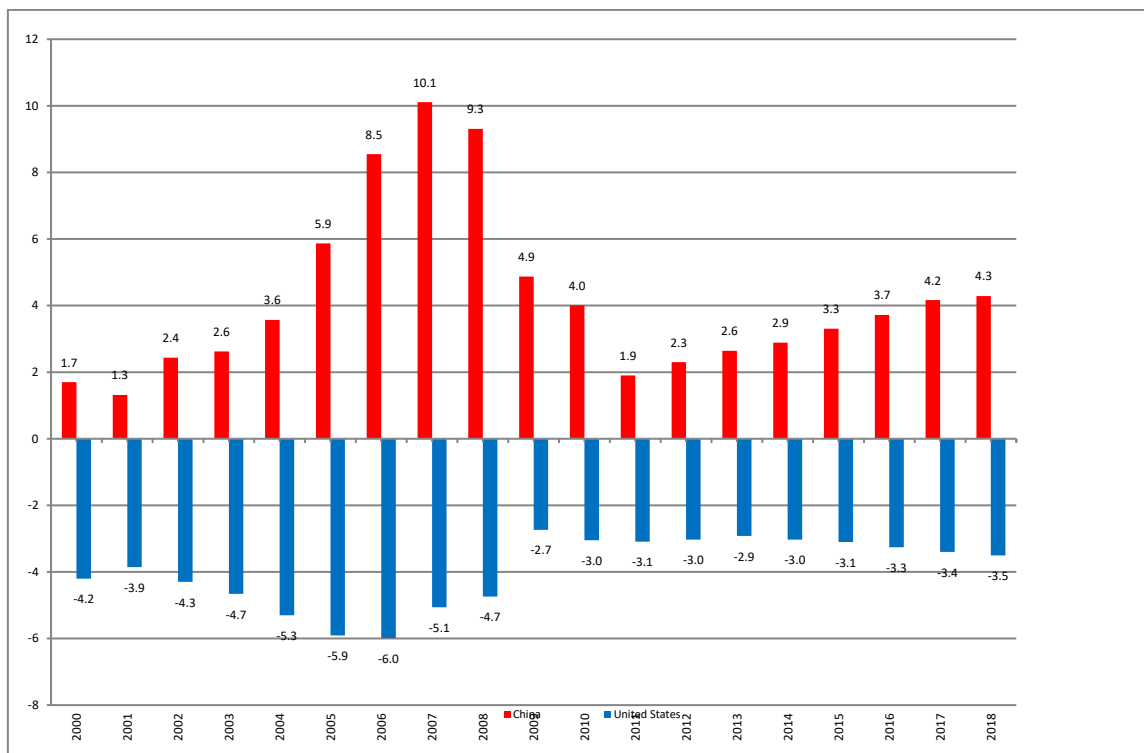
	Gross National Savings/Gross Investment (%)	Current Account Balance/GDP (%)
United Kingdom	75.5	-3.5
United States	77.3	-3.0
Canada	84.9	-3.7
India	84.9	-4.8
Brazil	85.7	-2.4
France	88.1	-2.4
Indonesia	92.5	-2.7
Mexico	96.7	-0.8
Japan	104.8	1.0
China	105.7	2.3
Russia	115.7	4.0
South Korea	116.3	4.3
Germany	134.9	6.3

Source: Economist Intelligence Unit and International Monetary Fund.

Figure A-I. Chinese and U.S. Current Account Balances: 2000-2012
(\$ billions)

Source: International Monetary Fund.

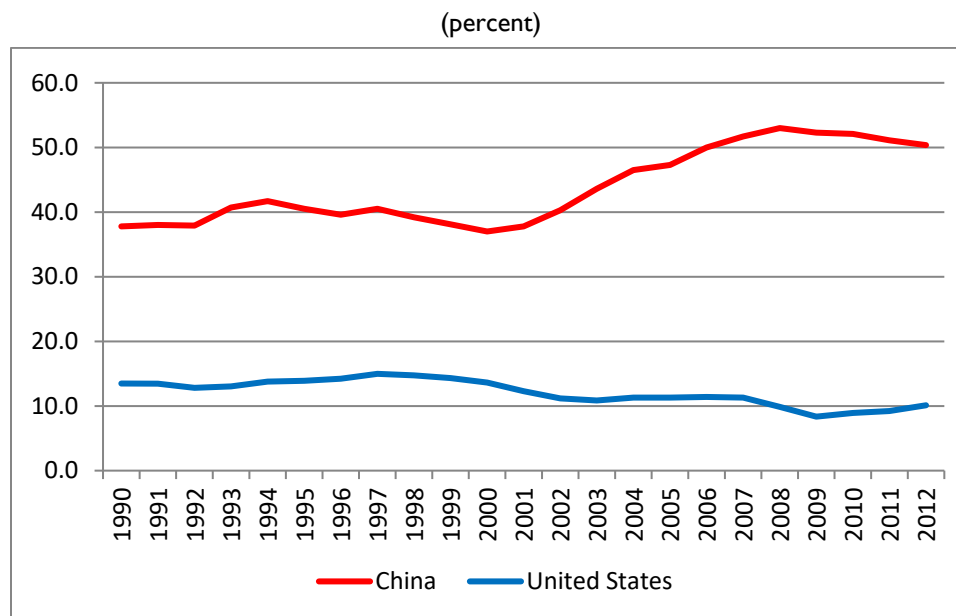
Figure A-2. Chinese and U.S. Current Account Balances as a Percent of GDP: 2000-2012 and Estimates Through 2018
(percent)



Source: International Monetary Fund.

Gross saving is the total level of domestic saving, including private, corporate, and government. Saving represents income that is not consumed. Physical investment spending on plant and equipment can be financed from domestic or foreign saving. Over the past several years, the United States has maintained one of the lowest gross saving rates (i.e., total national saving as a percent of GDP) among developed countries, while China has maintained one of the world's highest national saving rates. From 1990 to 2009, U.S. gross national saving as a percent of GDP declined from 13.5% to 8.4%, while China's rose from 37.8% to 52.3% (see **Figure A-3**). U.S. gross saving as a percent of GDP increased over the next three years, reaching 10.4% in 2012. Chinese gross savings levels have declined over the next three years, reaching 50.4% in 2012.

Figure A-3. Gross National Savings as a Percent of GDP for China and the United States: 1990-2012



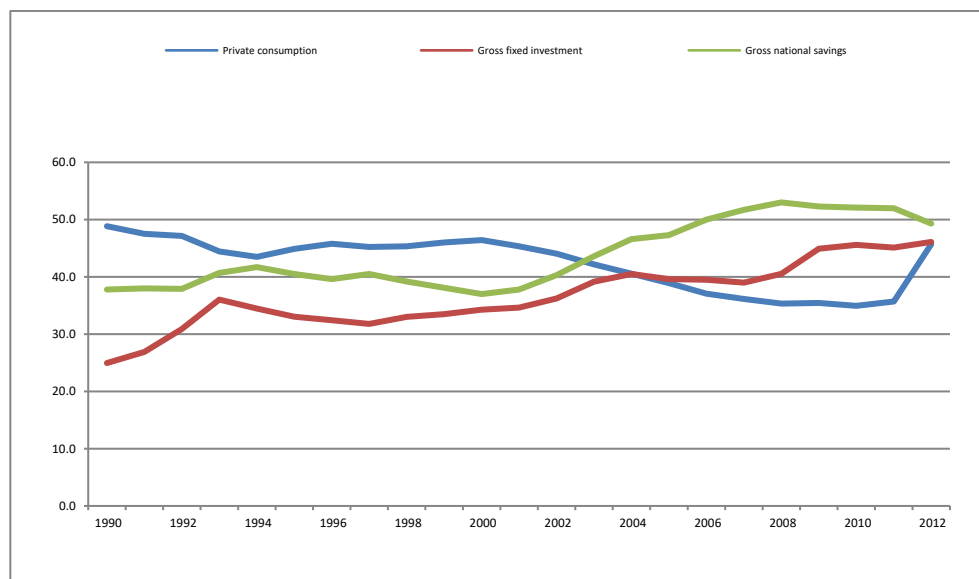
Source: Economist Intelligence Unit.

Notes: Aggregate national savings by the public and private sector as a percentage of nominal GDP.

Chinese Investment and Consumption Relative to GDP

As indicated in **Figure A-4**, China's gross investment as a percent of GDP rose from 25.0% in 1990 to 44.9% in 2009—the highest of any major economy (in comparison, the U.S. rate was 12.2%—the lowest among the major economies). China's investment as a percent of GDP rose to 46.1% in 2012. China's private consumption as a percent of GDP dropped from 48.8% in 1990 to 35.4% in 2009—the lowest among any major economy (while the U.S. rate in 2009 was 70.5%, which was the highest among the major economies). Chinese private consumption as a percent of GDP was 35.7% in 2012.

Figure A-4. Chinese Private Consumption, Investment, and Gross National Savings as a Percent of GDP: 1990-2012

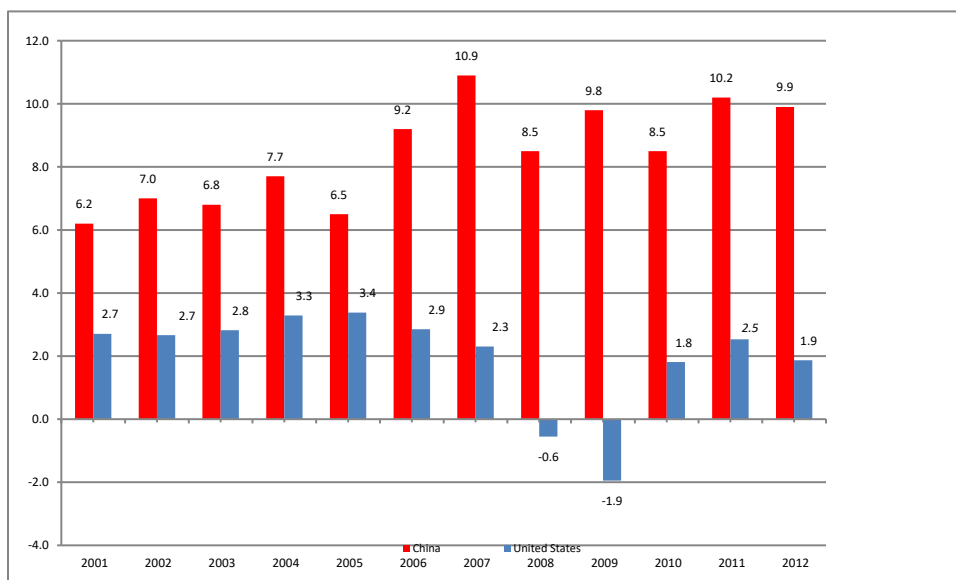


Source: Economist Intelligence Unit.

Although private consumption has been a much smaller share of China's GDP than other countries, the growth rate of China's private consumption has been significant. From 2001 to 2012, Chinese private consumption grew at an average annual rate of 8.4%, which was much faster than the growth in real U.S. private consumption, but slower than the overall growth rate of the Chinese economy (see Figure A-5).

Figure A-5. Annual Growth in Real Chinese and U.S. Private Consumption: 2001-2012

(percent increase over the previous year)



Source: Economist Intelligence Unit.

Many analysts contend that, although Chinese labor productivity has risen rapidly over the past several years, workers' wages have not kept pace with those productivity gains, largely due to the lack of worker rights in China, especially for migrant workers who tend to seek work in labor-intensive, export oriented, manufacturing. Rather, it is argued, the gains from productivity have largely accrued to Chinese firms.¹¹¹ In addition, because the Chinese government maintains tight controls on capital outflows, Chinese households are limited in terms of where they can invest their savings. Most choose to deposit their savings in a Chinese bank. However, bank interest rates are set by the central government, and oftentimes, the rates of return on savings deposits are below the rate of inflation (see **Figure A-7**). Chinese depositors faced negative real interest rates in 2004, 2007, 2008, 2010, and 2011. Many economists contend that this policy represents an effort by the central government to keep the cost of credit low for Chinese firms (in order to boost fixed investment), but that this comes at the expense of Chinese households whose savings deposits can actually lose value, thus forcing them to save more of their income to cover the costs of health care, retirement, and other large expenses.

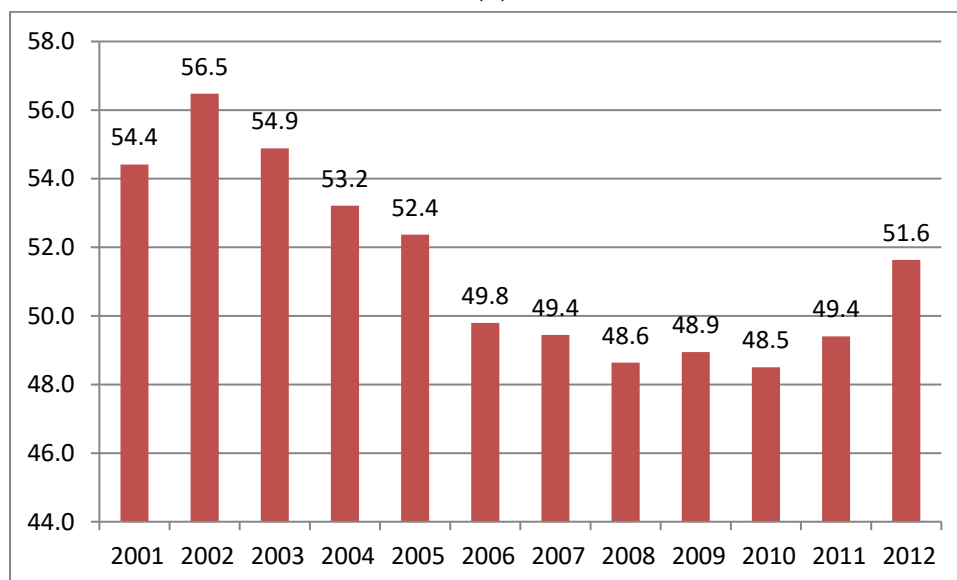
Some have concluded that Chinese controls on bank interest rates have dampened the level of household spending/consumption that would have been expected, given the rapid rate of China's economic growth.¹¹² As indicated in **Figure A-6**, China's personal disposable income as a percent of GDP declined from 56.5% in 2002 to 48.9% in 2009, indicating that Chinese households did not benefit as much from China's economic growth as other sectors of the economy. That rate fell to 48.5% in 2010, but increased to 49.4% in 2011 and to 51.6% in 2012.

Many economists contend that the goal of rebalancing the Chinese economy toward greater reliance on personal consumption cannot be achieved until the central government eliminates distortive economic policies that favor firms over households. Once such policy relates to the government's control over much of the country's banking system.

¹¹¹ This is not to say that Chinese wages have not gone up in recent years. From 2003 to 2012, real wages increased by 153% or an average annual increase of 11%. Source: EIU.

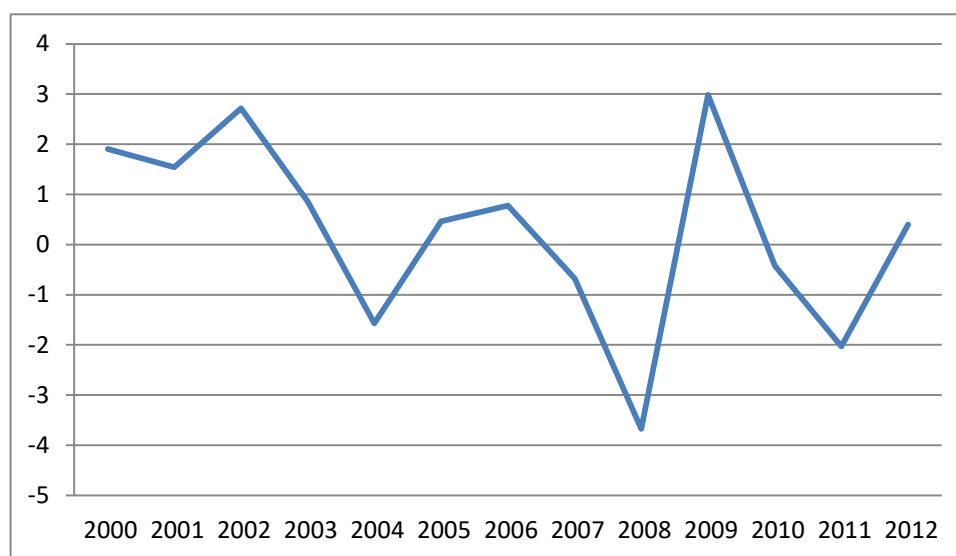
¹¹² Chinese house consumption is also repressed because of the lack of an adequate social safety net. This forces them to maintain a high rate of savings in order to pay for medical costs, education, and future retirement costs (if they don't have a pension).

Figure A-6. Chinese Personal Disposal Income as a Percent of GDP: 2001-2012
(%)



Source: EIU database.

Figure A-7. Chinese Real Deposit Interest Rates: 2000-2012
(percent)



Source: Economist Intelligence Service.

Notes: Interest rates on one-year deposits adjusted for changes in the consumer price index.

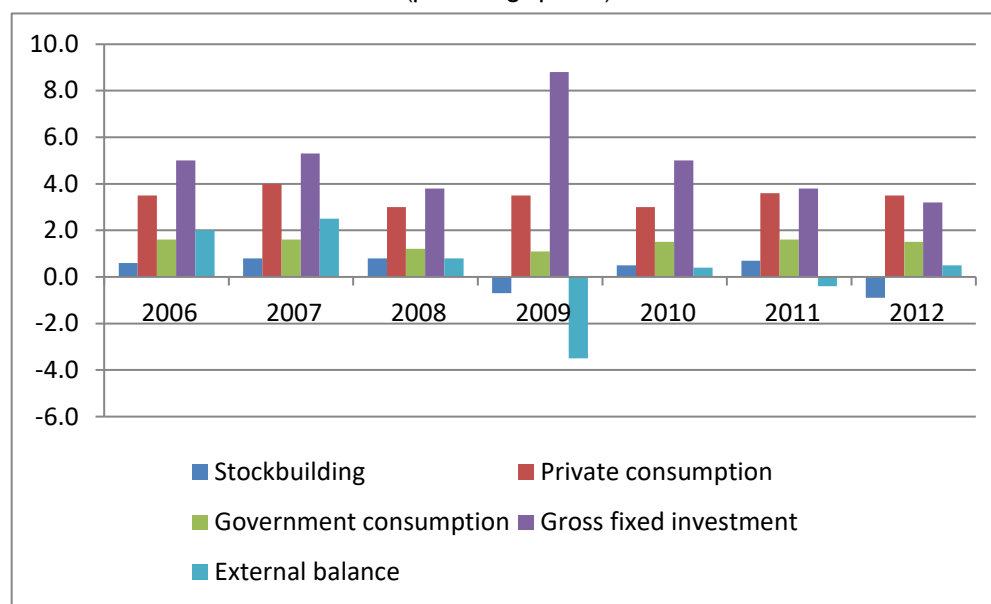
Sources of China's Economic Growth

The sources of China's real GDP growth from 2006-2012 are shown in **Figure A-8**. Gross fixed investment (some of which is linked to tradable sectors) was the largest contributor to its real GDP growth over much of this period. The sharp growth in fixed investment in 2009 appears to

reflect the results of the Chinese government's \$586 billion stimulus package and its monetary easing policy that encouraged banks to expand lending—a significant amount of which is believed to have gone to infrastructure projects. In 2009, changes to net exports in China were a drag on the Chinese economy, while in 2010 they provided a modest contribution to GDP growth. In 2012, private consumption was the largest contributor to China's GDP growth.¹¹³

The next few years could be a critical period for China's economic policymakers. A number of economists have questioned the quality of China's massive investment efforts over the past two years and the ability of local government to repay the loans they took out to fund major investment projects. Thus, the importance of fixed investment to China's economic growth over the next few years could decline. The Chinese government's 12th Five Year Plan (2011-2015) states that rebalancing the economy, promoting consumer demand, boosting rural incomes, addressing income disparity (such as boosting wages), promoting the development of the services sector, and expanding social welfare programs (such as education, social security, and health care) will be major priorities. Such policies, if implemented, could provide a significant boost to consumer spending. Based on China's historical economic model, it will likely take several years for a significant rebalancing of the Chinese economy to occur. In addition, many economists have raised concerns that, as China's major trading partners, such as the United States and Europe, begin to experience more rapid economic growth, their demand for Chinese products will increase, which could discourage China's government from following through on economic reforms necessary to promote a rebalancing of the economy.

Figure A-8. Chinese Real GDP Growth and Sources of GDP Growth: 2006-2012
(percentage points)



Source: Economist Intelligence Unit.

¹¹³ The last time this occurred was 2000.

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